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Management

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in the smaller firm


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methods

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Policy re manuscripts: The object of **MANAGEMENT METHODS** is to offer "practical solutions to management's problems." For that reason we never highlight a problem without offering at least a partial solution or a recommended course of action. Whenever possible, we like to offer the reader something he can do right now to correct a procedure or solve a problem in his business.

Much of our editorial material comes from business and management specialists as well as from active businessmen at all levels of management.

Most articles employ case histories. An article may be based on a single case history or can be built around a group of related case histories. We like to mention the name of the user company involved in each case history and, when possible, to quote an officer of the company.

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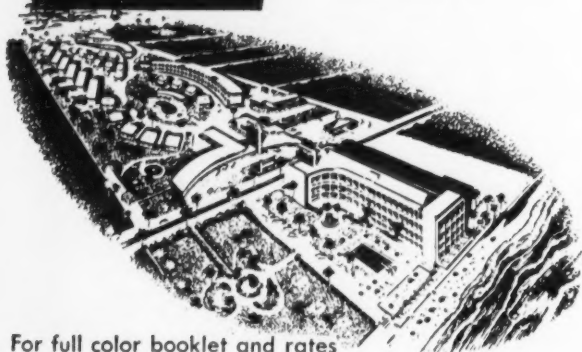
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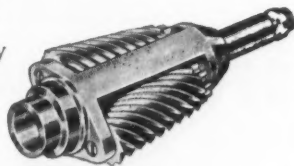
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"I think



Dear Mr. Editor:

With the exception of a small section of your article, relatively little mention was made concerning companies employing fewer than 25 clerical workers. In my estimation, the John Plain Company, during normal operations with 40 clerical workers and 8,000 stock items, does not come under the heading of "small" business. There are hundreds of smaller companies (which are still very sizable) to one of those in the top league you have mentioned. The New York Telephone Company and The Chesapeake and Ohio are definitely big-time.

Undoubtedly, our operations could be simplified by the use of electronic equipment. We still haven't been able to justify the cost as compared to a reduction in clerical personnel. The construction industry, of course, does not involve routine matters.

JOSEPH E. VOLLAR, JR.
PRESIDENT
Vollmar Bros. Construction Co.



Dear Mr. Editor:

Our company, in terms of the number of office employees, is "small." Although our people are processing an average of 10,000 orders monthly, our clerical staff runs only 125 workers, including all officers and administrative employees. Small departments are common, such as the 9 members of the cost department, 10 in payroll and general accounting, 7 in credit and accounts receivable, 15 in purchasing. Our clerical staff averages 13% of those employed in our Cleveland factory.

Thus, the adoption of any electronics program in the office must have a low enough cost and a wide enough application to free sufficient employees to pay out the equipment cost or rental. As your

article points out, the present development of such equipment requires a good-sized clerical force reduction before pay-out is achieved.

To the small company, continuity of employment and decreased turnover are very important in keeping morale high. If our 125 clerical workers found half of their number eliminated through an electronics program, they would expect to be employed in other work utilizing their skill. It would be difficult to transfer them to factory work; our policy of continuous employment would oppose an outright lay-off. Thus, we come back to your concluding statement that management must recognize its social and economic responsibilities in the paper work revolution which faces us.

We have chosen to keep ourselves up to date on electronic development. But rather than spend time and money in detailed analysis, we are waiting for news of equipment which seems better adapted to the needs of the small company. When a vendor has such equipment, we will listen to his story. If savings can be demonstrated, and if our social responsibilities can be properly discharged, we will act.

We salute MANAGEMENT METHODS for a thought-provoking article.

FRANK GRIESINGER,
ASSISTANT TREASURER
The Lincoln Electric Company



Dear Mr. Editor:

Your recent report on "Electronics for the Office" impressed us as a significant step toward improving management understanding of what the "electronic revolution" means to our economy. Congratulations on closing this gap in communica-

tions—we hope it will have widespread effect. . . .

FREDERICK M. HOAR
Electrodata Corporation

Dear Mr. Editor:

I think you have under-estimated the ability of business and industry to absorb new techniques. Your three-year target date, therefore, is too long. I know of one large company starting electronics accounting (not tabulating) January 3. I am sure they didn't start three years ago to prepare for it. . . .

R. D. TRUNDLE,
PRESIDENT
The Trundle Engineering Co.



Dear Mr. Editor:

Re your article on electronics, I'd like to add a few words:

Progress in the direction of electronics will be gradual, as it has been with electro-mechanical forms of automation. Lack of sufficient management education will be the delaying factor. This lack of knowledge will result in the same mistakes and the same failures that have impeded automation for many years. Installation failures will be blamed on electronic equipment generally, rather than on its incorrect adaptation.

As the months pass, two extreme schools of thought are becoming more and more vocal. The first proclaims that electronics are too far in the future to consider seriously, that the cost is too great, that we must first consider office automation of other types. They claim it will take years of "operation research" to study electronics, without being too certain of what the words mean.

The second maintains that electronics and automation in general must assume

methods

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the entire burdens of industry and the sooner the better—our standards must be changed and immediate social and political reforms instituted.

Following in the wake of the chaos that the two extremes will cause in individual industries will emerge a new group of intelligent managers—who will understand both men and electronics.

Through the proper use of electronics vast sociological benefits are possible with the elimination of routine manual operations. The minute subdivision of labor, and the routine repetitive tasks performed by millions in industry, have, for them, robbed life of its creativeness.

Special attention will be given in the future to machines that are convenient and inexpensive to make, run, and repair—but more important, which are adapted to man's control and creative ability.

The recognition of the proper relationship of management, men and machines is the important factor. We are fortunate in having an enlightened and democratic government and for the most part, enlightened management.

Without any serious disruption of our social and economic welfare, electronics should ultimately benefit us all.

DON TITUS

SENIOR ELECTRONIC METHODS ENGINEER
Fairbanks Associates



Dear Mr. Editor:

The economic impact of electronics applications in clerical work, or the factory, seems overstated. Because of the investment required, management's reticence to accept change, and the time involved in planning installations and procuring equipment, the revolution should be gradual enough to permit economic readjustment as the change is occurring.

JOHN LEITER,

Lawrence-Leiter and Company

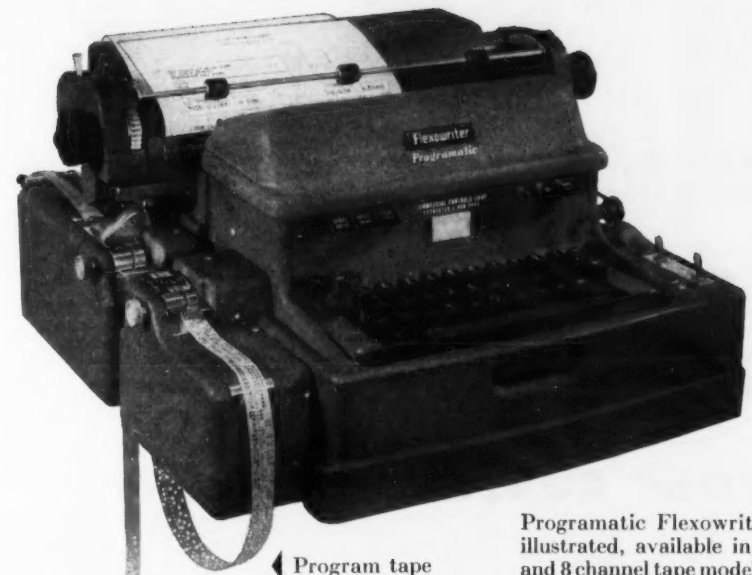
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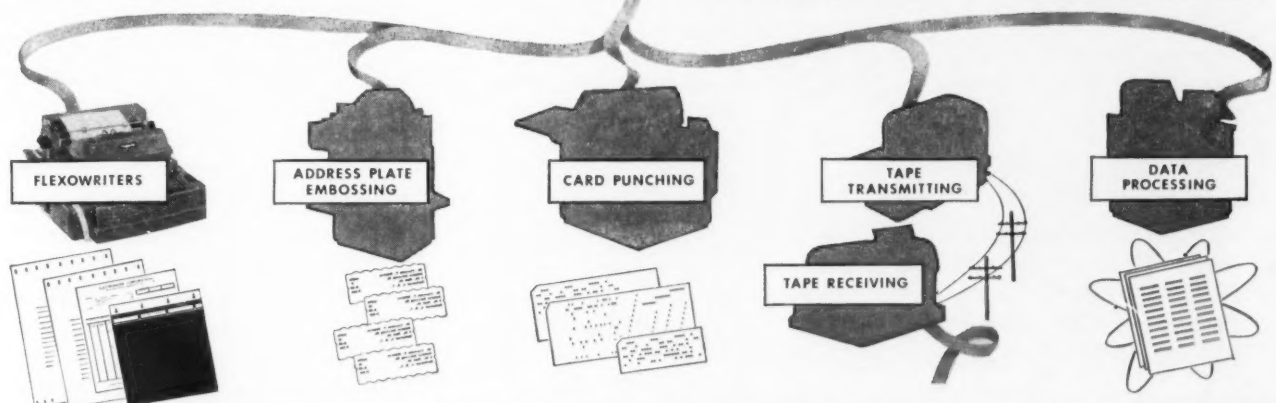
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case histories FOR SALES MANAGEMENT

by Charles S. Roberts, Charles Roberts Associates

Mr. Roberts is a management consultant who has specialized in marketing research and sales management problems since 1945.

Timing the introduction of a new product

Management recognizes today that many advantages can result from using proper timing in the initial marketing of a new product. Furthermore, owing to the risks usually faced when pioneering with new products, it becomes prudent to utilize the element of timing in the most favorable manner. Often, skilled judgment in knowing just "when" to move with a new product has spelled victory in what might have otherwise been unprofitable campaigns.

The technique followed by a certain large and diversified company vividly illustrates how this company used market research in deciding whether or not the timing was right for entry of a new product. This firm is principally identified with the chemical industry, while also manufacturing some well-known consumer products. It had succeeded in developing a new chemical believed to possess interesting properties both as a fuel and as an ingredient in new chemical formulations having unique applications. The question facing the company was whether or not the extent of present market demand for the product warranted an immediate investment in a commercial plant.

An initial market study was conducted among a sample of companies selected as potential users or processors of this chemical. This sample was selected on the basis of their activities as they related to the theoretical uses of the chemical, based on patent examinations and the imagination of the

research and development group involved as to possible uses. As might be expected from the nature of this problem, a wide variety of industries was included in the sample.

The study took the form of a series of discussions with the directors of chemical research and other qualified personnel in each company. These discussions were designed to be flexible, in order to allow maximum freedom of expression and opinion on the many important characteristics and attributes of the new product being studied. At the same time, the interviews were regulated to the extent that the specific information sought from each company would be forthcoming in all cases, and thus the over-all objectives of the study would be met. The more significant objectives of this market study were to determine:

a. The extent to which there was a potential market which had not materialized because of lack of availability, and/or current prices of the product.

b. The extent to which this potential market could be realized at each point on a schedule depicting progressively decreasing prices for successive increments of time in the future.

c. The degree of progress in technical research and the extent of familiarity with, and interest in, possible use applications of the product.

d. The extent to which interest in research into use applications would be stimulated if the product were available at prices under "b".

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It was clearly evident from the findings of this study that development had not progressed to a point where the product could be used effectively, and the price, therefore, was not a factor. As a matter of fact, it was revealed that comparatively little was known, in general, by these companies about the new product or how it could be used. The conclusion was apparent that *no market existed as yet*, and that it was necessary to engage in an educational program.

The company provided samples of the product, patent information, and technical assistance to interested companies. Every opportunity was taken to encourage experimentation, in order that companies might become familiar with the new chemical. It was estimated that three or four years would be required before such experimentation had reached a point where the chemical would be required in commercial quantities. The study also:

1. Indicated the probabilities as to where a market might ultimately be developed.
2. Developed the dimensions of the price structure that would be necessary for economically practicable uses of the chemical.
3. Suggested the various formulations in which the chemical might be more acceptable. In this sense, it might tend to hasten the time of commercial acceptance inasmuch as these suggestions for product formulation were followed in many instances.

A follow-up study

Following the initial study, the company continued to keep its eye on advances in the experimentation of its potential customers. After two years passed, a second market study was authorized for the purpose of obtaining a fresh "close look" at conditions. Many of the same companies in the initial sample were again visited and, in this manner, direct and unmistakable evidence could be obtained of pertinent advances in the two-year span.

The second study disclosed the existence of a limited but growing demand for the chemical, and further indications that, in the near future, this market would support the investment a

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potential supplier would be required to make. This time, more precise specifications, as well as cost data, were developed in regard to the product.

Meanwhile, the company did not cease its internal research efforts to develop a more economical method of producing the chemical, nor its contact with potential users. As expected, a point was reached within two years after the second study where the research and progress of the supplier had merged successfully with that of a group of companies, and a new market had been created. The former firm now enjoys a dominant role in the new field and, in addition, has made sales of certain of its allied products among several of its new customers.

During the latter stages of the development period, the company had become gradually prepared for the move into the market, so that the transition from a research to a commercial enterprise occurred smoothly. The entire venture was launched without any loss. Two important aspects of this and similar marketing problems where the element of timing is critical are:

1. If a study or an investigation of a specific situation fails to reveal the important estimates of time and future dates, in precise enough language to be of value, management should consider performing one or more follow-up studies at shorter intervals of time. In this manner, an accurate gauge of the rate of change from a given set of marketing conditions can be obtained, and a more satisfactory prediction made of future conditions. It must be remembered that the important thing to know is not merely *what* the conditions are at a given time for a given situation, but rather what is the *direction and rate of change* of these conditions.

2. Managements recognize the value of a negative set of findings relative to what had been a desired course of action. Naturally, many studies will reveal findings containing surprise evidence and unlooked-for conditions, so that proposed plans must be altered. While this sort of an experience is frequently disappointing to management, it is, nevertheless, responsible for their holding a high regard for marketing studies which furnish them the facts on which they can base a decision. m/m

methods

\$\$\$tax tip\$\$\$\$\$

How the government applies

"NET WORTH"

when records are inadequate

by Benjamin Newman,

Tax Attorney, Member, New York Bar

Recent Supreme Court decisions have reaffirmed the validity of the Treasury Department's use of the "net worth" method of reconstructing an individual's income for purposes of tax assessment. Faced with a taxpayer who has kept inadequate records, the government has no alternative but to reconstruct his income from outside and indirect sources. Although the favorite tool for this job is the net worth method, there are several other ways whereby the "boom is lowered" on the unwary, careless, or negligent taxpayer.

There is the "bank deposit method," whereby the Treasury Department obtains transcripts of all bank accounts, going back as many years as it deems necessary. All deposits and withdrawals are examined, and an attempt is made to characterize deposits as taxable or non-taxable income. The government assumes that all bank deposits are income, unless the taxpayer can prove otherwise. It is obvious that without records, it may well prove quite difficult to explain the source of deposits made many years ago.

Where the businessman is concerned, and where his inventories are income-producing factors, the government may also use the "percentage of mark-up method" to compute the gross profit, and resultant net profit, in his busi-

ness. This method takes advantage of the supposition that similar businesses have similar percentages of gross profit. Once again, the best defense to such an assumption is the maintenance of accurate records.

The net worth method

The net worth method is the one most often used by the Treasury Department. Treasury agents will compute balance sheets of a taxpayer's holdings for the beginning and end of the tax year in controversy. The difference between the two statements is held to be the increase in net worth for the year. To this figure is added all personal and nondeductible expenditures not appearing on the closing balance sheet. The total constitutes the net income for that year. In investigating these personal and nondeductible expenditures, the government will delve into a taxpayer's personal habits and spendings. It will determine how much he spent on rent, food, clothing, recreation, and vacations. Did he buy an automobile? What luxury disbursements did he make during the period involved?

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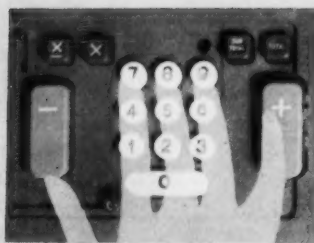
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completion of the given year.

Some case histories

On December 6, 1954, the Supreme Court handed down five decisions involving the net worth method, each of which presents a striking example of what a net worth case is and how it is developed. In one case, an operator of a legitimate coin machine business was convicted of willfully attempting to evade and defeat his own and his wife's income taxes for the years 1946 through 1949. Conviction was based on the Government's computation of net worth increases for these years, which showed net worth increases and nondeductible expenditures of \$62,993.43, whereas taxpayer had reported income of \$16,775.14. Taxpayer had not kept any actual books, and his receipts for the periods were tabulated from many receipt books, some of which were numbered and some not. Such a system, said the Court, placed taxpayer in a position of not keeping any books or records at all, and of receiving unrecorded amounts of income.

In ascertaining taxpayer's net worth for the four years in question, the Government came up with these facts: While taxpayer's declared income was only \$16,775, he had increased his bank balances by over \$16,000, had added \$1,000 to his holdings of U. S. Savings Bonds, had invested over \$9,000 in real estate, and had funneled some \$22,000 net additional capital into his business. These increments, said the Court, when considered in the light of taxpayer's receipts of unrecorded amounts of taxable income, were sufficiently at variance with his reported income to support an inference of tax evasion.

The "hidden gold" defense

A common defense, often asserted by a taxpayer involved in a net worth case, is that the net worth increase shown by the Government is illusory and not really an increase, because of the Government's failure to take into consideration the existence of a substantial amount of cash on hand at the starting point of the net worth computation. This favorite defense asserts

methods

(Circle 171 for more information)

the existence of a hoard of cash, made up of many years savings, secreted for those past years for various reasons, and not expended until the prosecution period. Such a defense was pleaded in one Supreme Court case.

In this case, taxpayer and his wife were convicted of attempted income tax evasion for the years 1946 and 1947. Taxpayers' defense was that the Government had failed to include in its opening net worth computations an accumulation of \$113,000 in cash and "hundreds and possibly thousands of shares of stock." Most of the cash, specifically \$104,000 of it, taxpayers claimed, had been accumulated by them prior to 1933 and had been stored since then and at various times, in a suitcase, a metal box, and in a canvas bag, and consisted mostly of \$100 bills. They further asserted that they had never dipped into their "cache" until 1946, when it became the source of their apparent increase in wealth, which the Government subsequently found in the form of a home, a ranch, a hotel, and other properties.

The Government's investigation of taxpayers' claim of "hidden gold" brought to light the fact that during the period taxpayers claimed to have accumulated this money, they had lost their business, accumulated \$35,000 in debts which were never paid, lost their household furniture because of an unpaid balance of \$92.20, suffered a default judgment of \$506.66, and were forced to separate for approximately eight years because it was to their "economical advantage."

By checking taxpayers' income tax returns as far back as 1913, the Government also negated the possibility of taxpayers having accumulated such a sum by showing that the income declared in those years was insufficient to enable them to save any appreciable amount of money. No one, said the Court, with so much cash on hand, would have undergone the financial hardship that taxpayers endured during the period prior to the determination of the opening net worth.

A similar story of hidden savings was asserted as a defense in the third Supreme Court case. In this action, taxpayer was indicted for tax evasion

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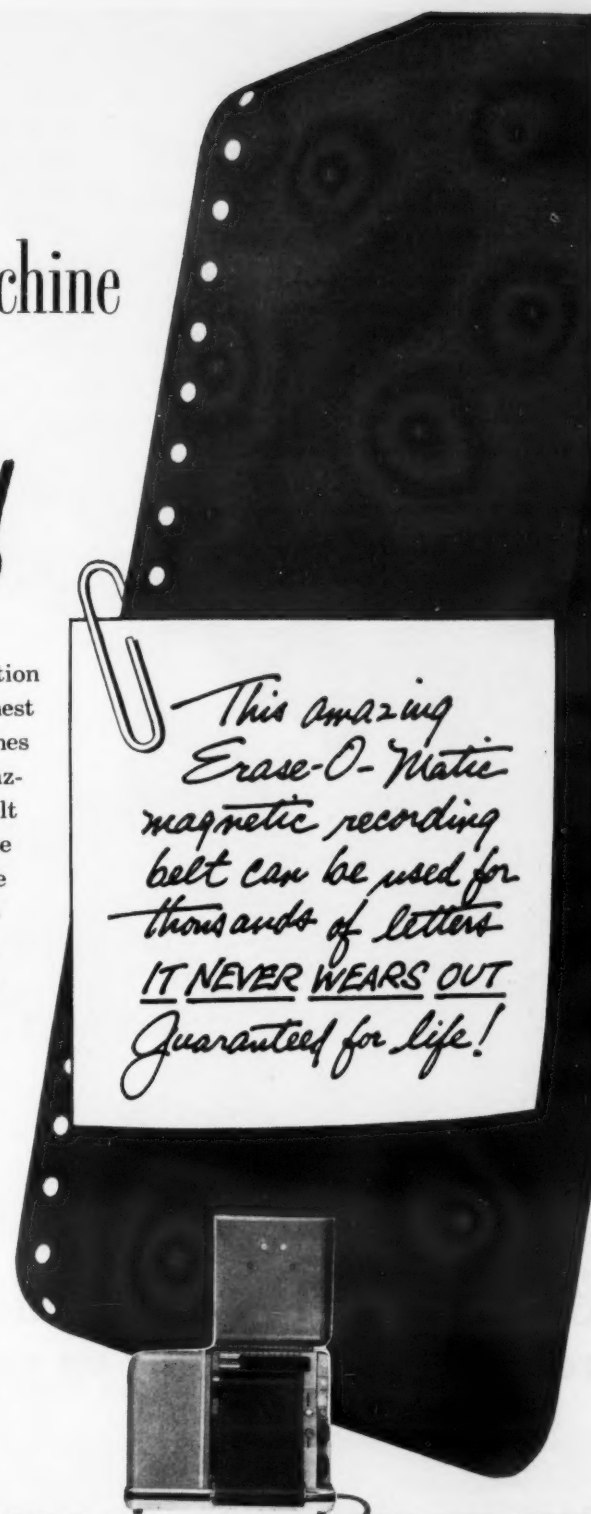


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(Circle 161 for more information)



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—W. A. SHEAFFER PEN CO., Fort Madison, Iowa

"We purchased our first National Accounting Machines 27 years ago. Their versatility and dependable service made it profitable for us to expand our use of Nationals as time went on and new models were developed.

"We now use National Accounting Machines for Accounts Receivable, Accounts Payable, Payroll, Labor Distribution, and General Ledger Posting, as well as a variety of accounting reports.

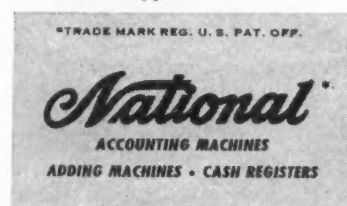
"We estimate that our Nationals (which

cost \$44,000) save us \$54,000 a year. Thus savings repay the entire cost every 10 months—an annual return of 120% on our investment.

"Ease of operation and dependability of National equipment provide additional savings in employee satisfaction, and minimum down-time."

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Vice President & Treasurer

In your business, too, National machines will pay for themselves with the money they save, then continue savings as annual profit. Your nearby National man will gladly show how much you can save—and why your operators will be happier.



THE NATIONAL CASH REGISTER COMPANY, DAYTON 9, OHIO
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(Circle 142 for more information)

for the years 1944 through 1947. Taxpayer claimed that he had saved cash "in excess of \$60,000" in the years prior to the prosecution period. The Government, in the preparation of its case had painstakingly traced taxpayer's finances from 1922 through the prosecution years, all of which evidence pointed unmistakably to the conclusion that taxpayer had no such hoard of cash at the starting point of the net worth determination. Taxpayer, the Government disclosed, although he had filed and paid a nominal tax in the years 1923, 1924 and 1925, had not paid any other income taxes for the years 1922 through 1937. In 1936 and 1940, levies on a judgment for the sum of \$13.76 were returned unsatisfied. Other facts brought forth from the shadows cast further light upon the absurdness of the claim.

Complete records are best defense

In countless cases, similar defenses of hoarded savings have been asserted. In a few of these multitudinous "hidden savings" cases, taxpayers have been able to convince the court that hidden money had actually been saved over a period of years, and secreted for those years for a myriad of reasons. However, in most of the cases, it appears to the writer that such a defense is asserted by taxpayer with a tongue-in-cheek attitude.

These cases illustrate how burdensome and extensive a net worth case can become. Nor is there any guarantee of accuracy of the government's estimate of income, or in the taxpayer's rebuttal of that estimate. For without records, too great a dependency is placed on an illusive memory.

An accurate accounting system not only provides you with a detailed and analytical financial record, but it also substantiates, for tax purposes, your income and expense. Be certain that all entries in the books of account are substantiated and documented. Keep and safeguard all vouchers, supporting entries in your books. For if you can show that you are keeping the requisite records, and they truly represent the financial condition of your business, and do truly reflect your income, then the net worth method cannot be used against you. m/m

methods

It is becoming increasingly apparent to industry that fringe labor benefits, or supplementary labor costs, amount to a substantial portion of the present cost of production. Often, in those cases where they are unknown, they can mean the difference between profit and loss.

Many companies have published their fringe benefit data in annual reports, employee publications, and advertisements. The United States Steel Corporation has deemed fringe costs of sufficient importance to include it in its Annual Report to Stockholders. They said, in part, "Few people are aware of the full extent of the increase since the 1930's in the cost of an hour's work. The reason is that in wage rate compilations there is general failure to include with the basic straight-time wage rates, numerous items of so-called 'fringe' employment cost. The full cost of an hour's work to an employer includes not only the straight-time rate for time worked, but many other costs that have been advancing rapidly in the past fifteen years. . . . These 'fringe' items have exactly the same effect upon production costs and selling prices as though they were straight-time wages."

In the NACA Bulletin, Cletus P. Elsen, of E. Kahn Sons Company, Cincinnati, wrote: "In determining product costs for sales and inter-departmental transfers, out-of-pocket expenses must be clearly shown at all times. This is particularly important in the meat industry where profit margins are very small (averaging about 1% of sales). In most cases, the single element of fringe labor costs amounts to more than the total potential profit on a product."

Fringe costs and your firm

Do you know what these benefits or costs amount to in your business? Have you thought what the future may

bring in this respect? Increasingly, workers are using fringe factors in their negotiations and re-opening of contracts. This is not meant to be a criticism of either labor or management for their policies toward employees' welfare, but to show them both the benefits which have accrued over a period of years, and to emphasize the fact that management should be more cognizant of these benefits in figuring costs of manufacture today.

For example, here's how fringe benefits have affected one segment of one company, Consolidated Chemical Industries Incorporated, at its Pacific Division, which manufactures high-quality animal adhesives (glue) and its by-products. It is the largest manufacturer of glue west of the Mississippi River, producing an average of 1,000,000 pounds per month.

In view of the fact that the World War II years tend to distort the actual economic situation, it is more feasible to compare the year 1941 with the year 1951. By taking these two average normal years, with a spread of ten years, we may more readily and equitably see what has happened.

by Moritz E. Pape
General Auditor Pacific Division, Consolidated Chemical Industries Inc.
Past National Director of the National Association of Cost Accountants

How to estimate the costs of Fringe benefits

Fringe costs are as important as direct costs in determining selling price

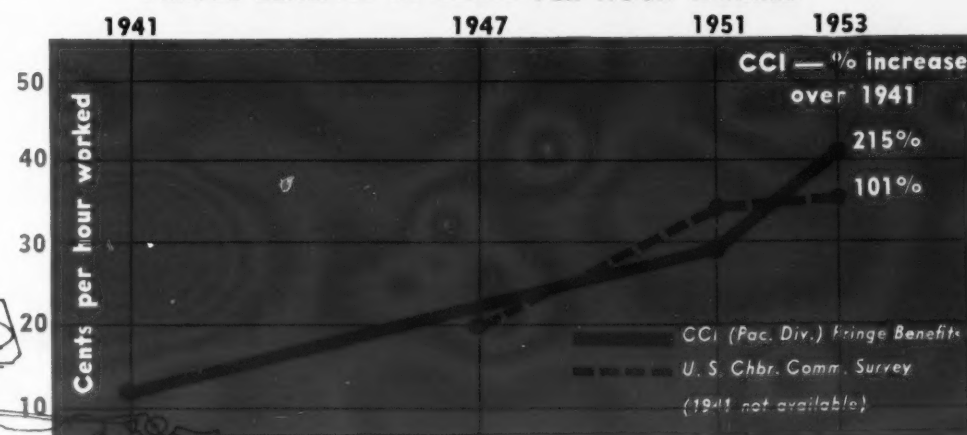
As a preliminary to the subject, it is important to know what supplementary labor benefits include. According to M. B. Lake, Comptroller of Seattle First National Bank, the benefits that are affecting most companies are:

1. Retirement and pension plans and supplementary benefits.
2. Social Security levies.
3. Industrial insurance.
4. Vacations.
5. Employee education and training.
6. Group life insurance.
7. Non-occupational sickness and health insurance.
8. Staff bonuses and gifts.
9. Renting company-owned housing.
10. Entertainment allowances.
11. Athletic activities.
12. Publications and memberships.
13. Group donations.
14. Food service.
15. Service recognition.
16. Emergency loan fund.
17. Leaves of absence.
18. Music.
19. Contributions in kind such as discounts, car allowances, etc.
20. Suggestion awards.

To these, we could add paid holidays, purchase of uniforms, and many others. This, by no means, exhausts the list, either.

The U. S. Chamber of Commerce, in their biennial Wage Supplements Surveys, shows that the ratio of benefits to total payroll was 14.4% in 1947, 16.2% in 1949, and 18.7% in 1951. Further, the benefits in cents per hour

FRINGE BENEFITS IN CENTS PER HOUR WORKED



What's this? Blackjack... at \$1⁷¹ an hour?



Should these men be fired? Absolutely not. They reported on time. But the work hadn't reached their department yet.

Next week the same department may need a second shift. And once again management may not know till too late.

Costly production mixups like this can be effectively forestalled with Keysort punched-card accounting. In this case, a *weekly* Keysort work-load summary would have shown which departments had a light work-week ahead...and which ones were due to be overloaded. Thus

necessary transfers, layoffs, extra shifts could have been ordered *on time*.

A McBee Keysort installation can give you comprehensive, accurate reports on every phase of factory operation, and give them to you *fast*. Complete figures reach your desk by the 4th of the month. Important interim figures come to you each Monday, or even daily. Whether you run a 100-man branch plant or a manufacturing giant. And at very low cost.

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(Circle 136 for more information)

worked were 19.2c, 24.8c, and 31.5c respectively, and the benefits per employee per year increased from \$393 to \$505 to \$644 for 1947, 1949, and 1951 respectively.

By way of comparison, CCI's Pacific Division benefits increased 101.3% from 1941 to 1951. The following items were selected, in order to coincide with those shown in the U. S. Chamber of Commerce Surveys:

	Increase 1951 over 1941
1. Total Social Security (employer's portion of FOAB, FUI, and SUI)	61.5%
2. Workmen's Compensation Insurance	13.8
3. Pension Plan (none in 1941)	100.0
4. Group insurance	278.8
5. Commissary	516.8
6. Sick Benefits (none paid either 1941 or 1951)	—
7. Vacations	124.0
8. Sick Leave (none in 1941)	100.0
9. Paid Holidays	76.8
10. Bonus	55.4
Total of all benefits	101.3%

Pension Plan and Sick Leave did not exist at all in 1941. Commissary's increase is not so significant as it is not a large item in dollar value.

CCI's Group Insurance which was represented by only one insurance company in 1941 with premiums on a contributory basis (employer and employee), was covered by four different companies in 1951. This, by the way, is due to some of the unions (of which there are nine at the Bayshore Plant) breaking away from the principal group insurance carrier and insisting, in their reopening of contract negotiations, that we cover their particular group insurance with the insurance company which they had selected. In the case of two of the three union-sponsored carriers, the company pays the premiums in full.

It should be emphasized that overtime premium pay is not generally considered a fringe benefit, and, therefore, should not be included in these studies. It is included in the base payroll, however, as it most naturally be-

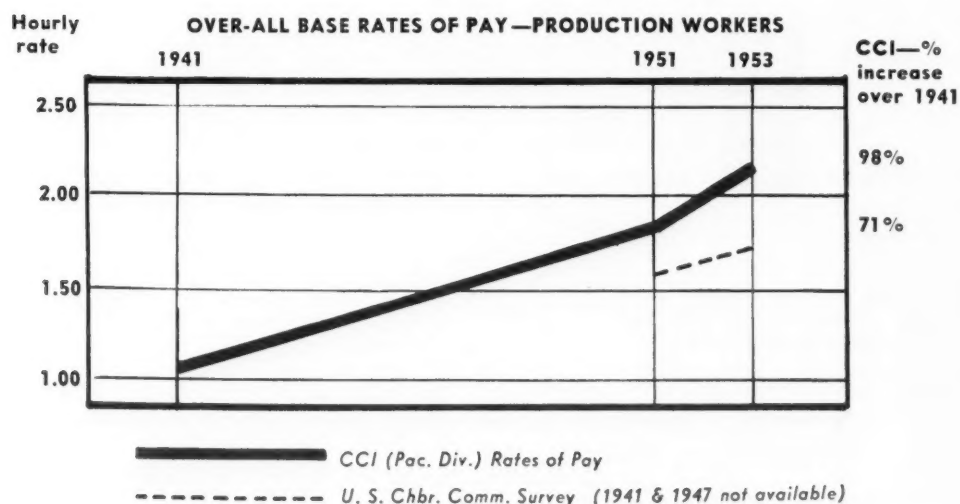
methods

comes a part of the base for calculation of social security, workmen's compensation insurance, etc.

Further, some may dispute the inclusion of employer's social security contributions as fringe benefits by the theory that this is a compulsory payment anyhow, and all employers have to pay it. However, this is an important benefit to the employee, not in the class of overtime, and should be included just as much as workmen's compensation insurance, which is compulsory too.

Analysis of one other item in our comparison of 1941 and 1951 is worthy—Paid Holidays. Although this has increased 76.8% in *dollar value*, we paid for seven holidays (in most of the union contracts) in 1951 just as we did in 1941. Therefore, increased rates of pay would be the obvious reason for this change, since the average number of production employees of CCI in this survey dropped from 180 in 1941 to 158 in 1951.

It would also be natural to conclude that the 101.3% increase in "Total of all benefits" would be due, in good measure, to increased rates of pay. Our over-all base rate of pay of production workers increased from \$1.08 per hour in 1941 to \$1.85 per hour in 1951. This means that if we were to follow the suggestion that the fringe benefits be added to the base rate of pay, it would have been \$1.21 per hour in 1941 and \$2.14 per hour in 1951. Because most surveys do *not* include fringe benefits, they are often misleading both as to labor costs and worker income.



The big picture

Now, let us compare the years 1941 with 1951 as to totals, together with the totals shown in the U. S. Chamber of Commerce Survey for 1951 representing 736 companies in all industry:

Fringe benefits compared to base payroll

	CCI (Pac. Div.) 1941	CCI 1951	C. of C. Survey 1951
Total non-wage payments as percent of payroll	11.8%	15.9%	18.7%
Cents per hour worked	12.8c	29.4c	31.5c
In \$ per year per employee	\$279	\$641	\$644

Further, it is interesting to note that CCI's 1953 figures have increased to 18.9% of base payroll, 40.9c per hour worked, and as much as \$822 per year per employee.

Has efficiency gone up?

While reviewing these many fringe benefits and their rapid increase, we may also question whether or not efficiency has improved. Is labor's productive power growing proportionately, and is management's operating efficiency helping to offset this increase of the fringe?

Despite the decrease in the average number of production workers at CCI, from 180 to 158 in 1941 and 1951 respectively, the pounds per man production of glue increased 27% in ten years. Further, the pounds per man hour increase in ten years was 27%.

(next page, please)



Counts 10 times as fast as you can!

(Optionally imprints or "rubber stamps" at speeds up to 1,000 a minute!)

The manual counting and imprinting of the many paper items necessary in today's offices and factories is an *expensive* operation, however hidden the cost!

Now, with the remarkable electrically operated Tickometer, this expense can be greatly reduced.

The Tickometer counts up to 1,000 pieces *per minute*—labels, slips, tickets, tags, cards, currency, coupons, checks, etc. Gives whole or partial counts. And, withal, it's so accurate, banks use it to count currency!

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be equipped to date, code, cancel, "rubber stamp"—or otherwise imprint, as it counts. Manufacturers of food and drug products use it to prevent imitations, to identify origins, inspectors, factory lots—quickly, unobtrusively, cheaply.

Rented, as well as sold, the Tickometer is serviced from 259 service points, coast-to-coast. Ask the nearest Pitney-Bowes office for a demonstration. Or send the coupon for a free illustrated booklet and a folder of case histories.



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Stampede on the 25th floor! It's a fact that in many office buildings, elevator traffic reaches its peak at 10 A.M., the time for the "coffee-break". Rudd-Melikian's Kwik-Kafé system puts an end to this widespread loss of time and efficiency.

Employees take their "coffee-break" right in the office or plant, without leaving their work

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Rudd-Melikian, Inc. is the leader in the field of "coffee-break" control, installing and servicing dependable dispensing machines that supply delicious Kwik-Kafé coffee and leading soft drinks at no cost to management.

There is a Rudd-Melikian dealer

in most principal cities. Contact him, or write direct to us.

You don't have complete control unless you have Kwik-Kafé.



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City..... Zone... State....



RUDD-MELIKIAN, INC.

CREATORS OF AN INDUSTRY
(Circle 164 for more information)

However, in 1948, CCI installed a new type of drier which cost a quarter of a million dollars, and which eliminated approximately 20 production workers. Could it not be, therefore, that the efficiency of this new machinery accounted for the 27% increase in pounds per man hour? If so, this would eliminate the pounds per man increase of 27%, because the average number of production workers dropped from 180 to 158, or approximately the 20 eliminated by the drier.

Capital and management are endeavoring to improve their products, efficiency of operation, and greater return on investment. Management is more conscious of employee welfare than it used to be, due, in no small part, to union and government social reforms. Labor has unquestioningly improved its lot.

If management has benefited in the past decade, the gains are attributable in large part to improved methods and machinery. It behooves management to invest in environmental and other factors which contribute toward increased productivity of its workers. m/m

"worth

More human relations training:

At the United States Military Academy, cadets receive a three-year course in Military Psychology and Leadership. This course appropriately starts with instruction in psychology in the sophomore year, in order to lay the foundation for an understanding of human behavior. It ends with instruction on several principles of leadership through the study of actual case histories of leadership problems. Thus, the newly commissioned 2nd lieutenant from West Point has been impressed with the fact that a military commander is a leader only if he gives full concern and consideration to the human relations factor. As he progresses through the Army school system, he continues to receive instruction on the subject. I do not believe comparable instruction on this subject in either the undergraduate or postgraduate training of civilians is in practice. Col. E. R. Heiberg, U. S. Military Academy, West Point.

repeating"

methods

How to use closed circuit TV

A DO-IT-YOURSELF APPROACH TO THE USE OF INDUSTRIAL TV

Closed-circuit television has become so commonplace in business that you have probably been exposed to it without ever knowing it. The variety of applications is literally infinite, and new ones appear every day.

Even a representative catalog of applications would run into the hundreds. On these pages we can present only a few generic uses from which a businessman can draw sufficient information to stimulate his own thinking.

It is important to recognize that new applications are most often user-developed. Specialized training or knowledge is not required in this area once certain basic facts are understood.

The basic facts you need

Unlike "commercial" television, closed-circuit TV doesn't go "on the air." Instead, a cable carries the image from the camera to the monitor. From the monitor it can be dispersed, by wire, to a group of other receivers. These receivers may be in different locations. There's nothing "fancy" about these receivers—inexpensive commercial television sets can easily be adapted.

Price for the equipment varies depending upon the installation problems and the amount of cable and wire needed. One manufacturer sells the equipment for between \$3,000 and \$4,000, which includes the costs for supervision of installation and training of personnel in the operation of the equipment. Basic equipment includes the camera, electron tubes, and a combination control-monitor, power supply unit.

The industrial TV camera is rugged. It is able to operate 24 hours a day, seven days a week, with a minimum of service. It can withstand the intense heat required in steel making, and it isn't affected by radioactive materials.

Closed-circuit TV is portable—about the size of a 16mm movie camera—which also makes it practical for installations in a small space. It presents a clear picture, perhaps not as sharp as the image in commercial TV (since the camera is not as intricate and since lighting is seldom optimum), but good enough to read blueprints, transmitted from building to building in a factory.

Considerable literature is available detailing specific uses to which closed-circuit TV may be applied. For more information, circle number 247 on the Reader Service Card in this issue.

1 SELLING THE CUSTOMER



TRANSMITTING

Remington Rand had a very specialized sales problem. A group of 50-60 potential buyers were interested in learning how the company's new computer worked. As the group was large, RemRand realized that it was impossible for everyone to get the close-up view needed to understand the workings of the equipment.

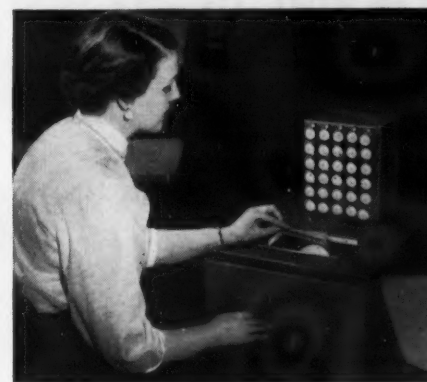
The important part of the unit is the input printer that feeds information into the machine. RemRand wanted the group to see what the printer was typing.

To make this possible, two TV cameras were brought in and connected to five receivers. In this way, everyone was able to view the enlarged pictures on the screen as the computer proceeded to solve a difficult problem. At the same time, they were able to look through a glass partition in back of the receivers and watch the actual machine operating.

RECEIVING



2 REMOTE RECORD STORAGE



TRANSMITTING

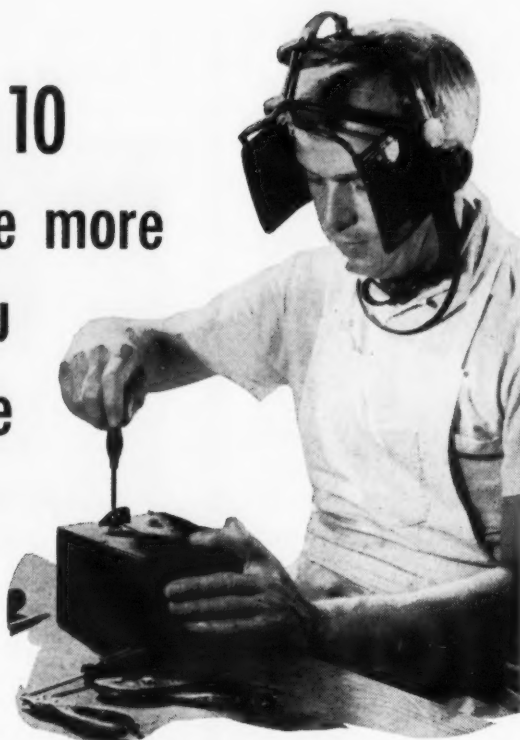
When a depositor hands his bank book and a withdrawal slip to a teller in the Boston Provident Institution for Savings, it is only a matter of seconds before his signature is verified, the transaction recorded, and the money and bank book back in his hand. This swift, effortless operation is handled by a closed-circuit television system.

Since its installation, a teller is able to verify signatures or check bank balances instantly and accurately *without leaving his window*. All the records and accounts are stored in one convenient location, which makes them more accessible and also saves valuable floor space. Additional cameras are also used for protection. They are mounted to swing from side to side and scan the entire bank at all times. The monitoring sets are installed in the executive offices and in the guard's room.

RECEIVING



4 out of 10 produce more when you take the BLINDERS off!



This worker doesn't know it (and neither does his boss) but he's costing you a lot of money because his eyes aren't right for his job!

The jolting fact is that probably four out of ten of your employees fit this category. And these are the employees mainly responsible for high production costs—work rejects, spoilage, accidents—excessive labor turnover, training time, absenteeism.

It's an established fact that 42% of America's industrial workers are visually unquali-

fied for the jobs they are on. Visual performance tests given more than 12 million workers prove the close relationship between employees' *seeing habits* and their *work records*.

Like hundreds of other firms, you will profit by giving your workers voluntary Bausch & Lomb visual performance tests. You administer them by means of the new improved Bausch & Lomb Ortho-Rater which you may now buy outright. The program is simple and easy to operate. It starts to pay off "overnight."



You'll find an eye-opener in a booklet we've prepared for you—"Eyes Right for the Job." Send for it now.

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(Circle 110 for more information)

3 A BIRD'S-EYE VIEW



TRANSMITTING

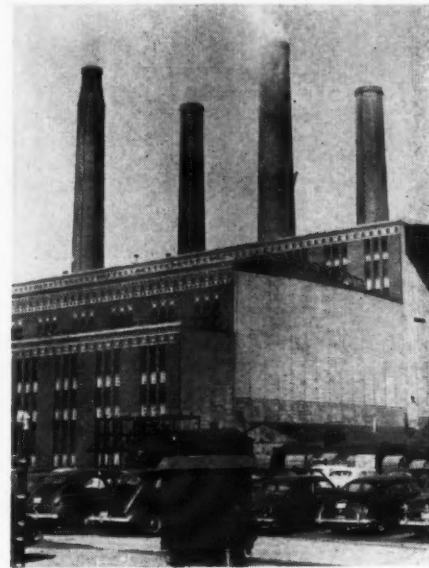
To speed up parking service, the Downtown Merchants Association in Oakland, California, uses television to spot vacancies immediately. A camera is mounted atop a tower overlooking the 225'x300' lot and is connected to a 21" television receiver in the entrance booth. A special pan and tilt mechanism, attached to an elevated control station near the tower, enables the camera to continuously scan the parking area and project what it "sees" to the receiver in the entrance booth.

When a motorist drives up, the attendant, by glancing at the screen, can direct him to an empty spot without having to leave his booth.

RECEIVING



4 AIR POLLUTION CONTROL

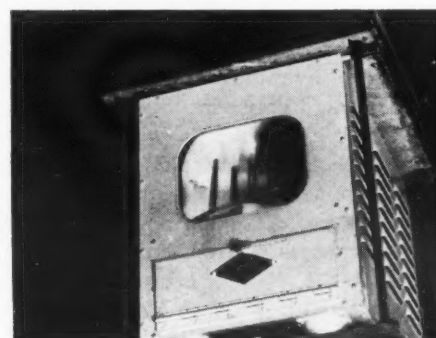


TRANSMITTING

The amount of smoke released daily from plants and factories is of great concern to business today because of air pollution on community health.

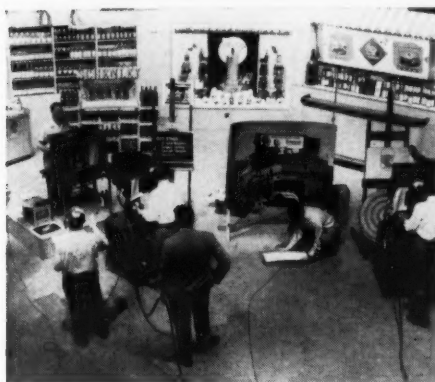
Boiler operators at the Commonwealth Edison Company control the smoke discharge from its stacks via a monitor screen located above the firing aisle in the boiler room. When a stack belches too much smoke, an operator can correct operating conditions immediately. The television camera, which is protected in a weatherproof housing, watches the plant's four smoke stacks from outside and relays continuously what it sees to the receiver's screen.

RECEIVING



methods

5 SELLING THE SALES FORCE



TRANSMITTING

In planning its annual dealer-distributor meeting, Schenley Distributors, Inc., had the problem of presenting a sales program to its entire nationwide organization. Obviously, a simultaneous presentation was desirable, but impossibly expensive—until the firm let TV do the job.

Over 10,000 salesmen met in television studios, hotels, and theatres in 38 cities. By means of a two-way "talkback" circuit, audience groups were able to direct questions to the Schenley executives. This visual communication solution cost the firm, in time and money, a fraction of what it might have been had they grouped everyone in a central area.

In a similar situation, the Sheraton Hotels Corporation applied the same technique. However, its audiences were larger and less widespread. Instead of individual receivers, a theatre-sized motion picture screen was used.

RECEIVING



6 "IMPOSSIBLE" OBSERVATION



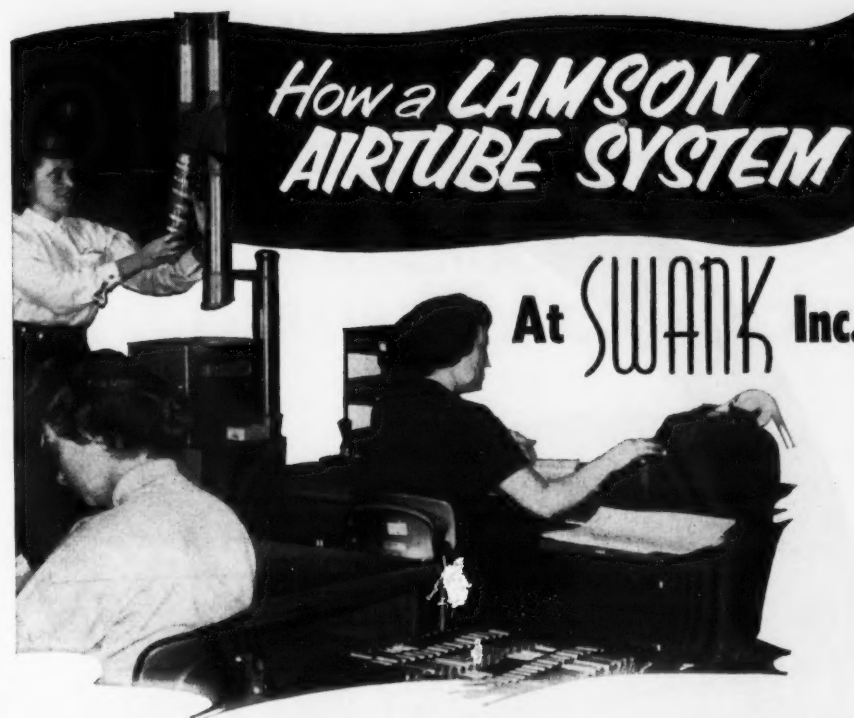
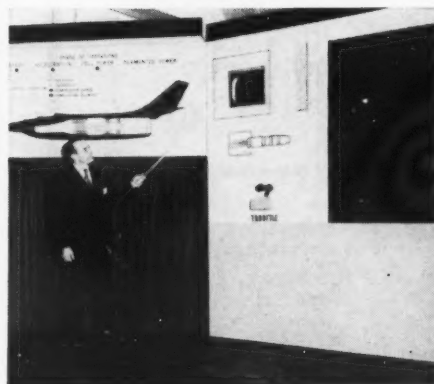
TRANSMITTING

Rocket research work at Lewis Laboratory often takes place in hidden and hazardous sections, where it is impossible to send a man. In one particular situation, information on a jet engine being tested was gathered by setting up a color TV camera to look through a window built into the wind tunnel.

The different colors of the poisonous exhaust gases, which have much meaning, were studied at a safe distance. The camera transmitted the information to a monitor screen which was mounted on a large display board in the lecture room.

The military personnel and businessmen present were given the readings and general breakdown of the new jet engine, which was set up on the display board under the screen. At the same time, they were able to watch the screen and see the actual experiment taking place.

RECEIVING




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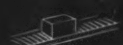





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7 SAVING INSIDE LEGWORK

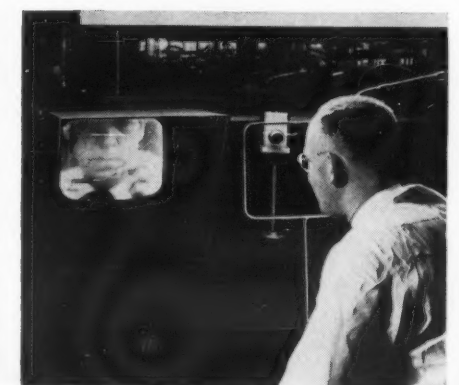


TRANSMITTING

In the modern plant of the American Standard Division of the Bulova Watch Company, the engineering group is located in one building and production in another. Blueprints must be checked carefully at all stages of preproduction and actual production. Visual communication provides just the means for achieving the effective work coordination required.

Television cameras, control units, and receivers have been set up in both departments. When an engineer has to check a design with production, he turns on his set, holds the drawing before the camera lens and talks into the microphone. The picture is transmitted instantly. Previously, the department superintendent spent valuable time walking from one building to the other, to clear every questionable detail that came up.

RECEIVING



methods

8 HANDLING "HOT" MATERIAL



RECEIVING

The Argonne Laboratories in Chicago was performing a dangerous test with radioactive materials which could not be safely handled. A very minute chemical analysis had to be made and it was necessary that the chemicals be accurately poured from one small vial into another.

Remote control equipment could not be used as it was not accurate enough without visual control. A unique television system was developed for them. It worked in conjunction with two remote control hands. The operator's fingers fitted into metal ones and, as he moved each finger, it was repeated by the mechanical hands set up in the next room.

The mechanical hands guided the flasks, picked them up, and accurately poured from one test tube to another. Color television was used so that the materials and equipment could be color-coded to simplify identification and avoid possible errors.

By splitting the monitor screen in half, and fitting a camera that had polaroid lenses with a binocular lens, two images were presented, which in turn produced a three-dimensional image. The operator also was fitted with polaroid glasses. Thus, the chemist, seeing at a distance in three dimensions, was able to manipulate all the intricate apparatus with the precision required, and at the same time a 14-foot concrete and lead wall was between him and the experiment.



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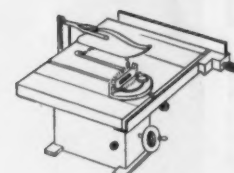
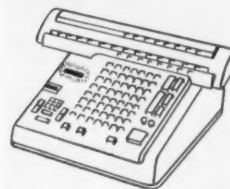


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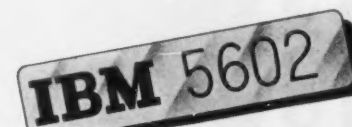
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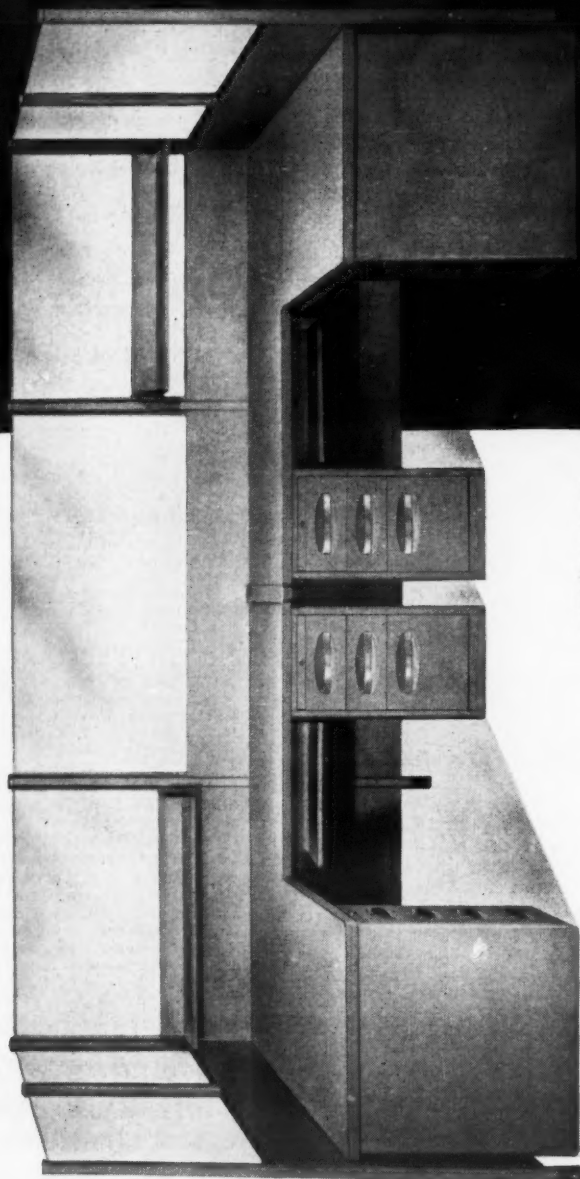
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diagnostics

FOR MANAGEMENT

by Leslie M. Sloté

Ass't to the Pres., Ketay Instrument Corp.
Management and Labor Relations Consultant

question:

"A firm that we know recently had their payroll records examined by the Wage and Hour Division of the Department of Labor. Several minor violations, obviously unintentional, were picked up and adjustments in back pay had to be made, going back two years, which is the statute of limitations in such cases. What immediate procedural steps would you recommend to make sure that our records are in order?"

answer:

It is an excellent idea to clean house now and make sure that your wage, salary, and overtime policies comply with all requirements of the law. First, be certain that your Payroll Department understands the full meaning and application of the Fair Labor Standards Act (1938, as amended), which primarily requires that one and one-half times the employee's regular hourly rate be paid for all hours worked in excess of 40 in any one work week. Remember that the regular rate must be computed as an hourly rate, regardless whether compensation is paid as a weekly, semi-monthly, or monthly wage or salary, piece rate, or commission.

Spell out the exact method of calculating the regular hourly rate for each employee category. This rate is computed by dividing total remuneration for employment (omitting statutory exclusions) in any work week, by the total hours actually worked during that week for which such compensation was paid. It must include such factors as production bonuses, sums paid out as gifts or bonuses (non-discretionary) which are measured by or

dependent upon hours worked, productivity or efficiency, paid waiting time, minimum hourly guarantees, etc.

For example, an employee in one week might earn \$46 at piece rates for 46 hours of productive work and be paid an additional 75c per hour for 4 hours of waiting time. The total of \$49 would be divided by 50 hours to arrive at his regular rate of 98c per hour. Thus, for the week's work, the employee is entitled to receive \$53.90, representing 40 hours at 98c plus 10 hours at \$1.47.

If, in the example quoted above, the employee had been hired at \$46 per week to cover all hours worked, and if the weekly hours of work fluctuated, his regular pay rate would vary from week to week and would be the average hourly rate each week. Suppose, for example, the employee worked 40, 46, 50, and 41 hours during a four week period. His regular hourly rates would be \$1.15, \$1.00, \$.92, and \$1.12, respectively. Since the employee has already received straight-time compensation for all hours worked, only additional half-time pay is due for all weekly hours worked in excess of 40. He is then entitled to \$46, \$49, \$50.60, and \$46.56 per week, respectively.

I know of an instance in which weekly salaried employees were transferred from a 40-hour to a 37½-hour work week. The company policy was to pay straight-time rates for additional hours worked in excess of 37½ and up to 40 hours per week, and, of course, time and a half for hours worked in excess of 40. The Payroll Department in computing overtime pay, made the common mistake of us-

methods

ing the old hourly conversion rate marked on the employee's individual earnings record. This meant that an employee earning \$40 per week was still paid \$1.00 an hour for any additional hours worked between 37½ and 40, and \$1.50 an hour for time worked beyond 40 in any one work week. Actually, the reduction in work week hours to 37½ meant that the straight time hourly rate was now \$1.07 and the premium rate \$1.60 per hour. Nobody was aware of this unintentional error, which later resulted in back pay liability, until it was picked up by an Inspector for the Wage and Hour Division. Also, if you are doing government work on prime or sub-contract, be sure to read the Walsh-Healy Act and interpretive bulletins.

Another point to check is the over-time exemption allowed by Part 541 of the Fair Labor Standards Act. Administrative, Executive, Professional, Sales, and other exempt categories are carefully defined and explained. Don't make the common mistake of believing that the bestowing of a title automatically creates an exemption. For example, although you may feel that your accounts payable supervisor is a supervisor in every sense of the word, her salary range plus the fact that she is a "working" supervisor, and spends perhaps only 15% of her time on supervisory duties, may not make her exempt under law. Set up descriptive job-categories that are bona fide in the sense of the law, which means that the criteria for exempt categories are the actual duties performed, and not the job title. Finally, be sure to read the Fair Labor Standards Act and related explanatory and interpretive bulletins, which are available from your regional Wage and Hour office.

question:

"We installed a new inventory control system and are wondering if it is necessary to maintain stock cards on such miscellaneous items as cartons, screws, washers, labels, tags, etc. Our Production Planning Department feels that it isn't necessary because as stocks run down, the items can be flagged by the stock

- How** big do we have to be in order to use electronics?
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**Electronics
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- ♦ Preparing Students for the Automatic Office
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- ♦ Preparing for Electronic Data-Processing
- ♦ Applying Electronics to an Inventory Problem
- ♦ Seminar: Orientation in Electronics
- ♦ Seminar: Initiating an Electronics Program
- ♦ Seminar: Using Present Electronic Equipment

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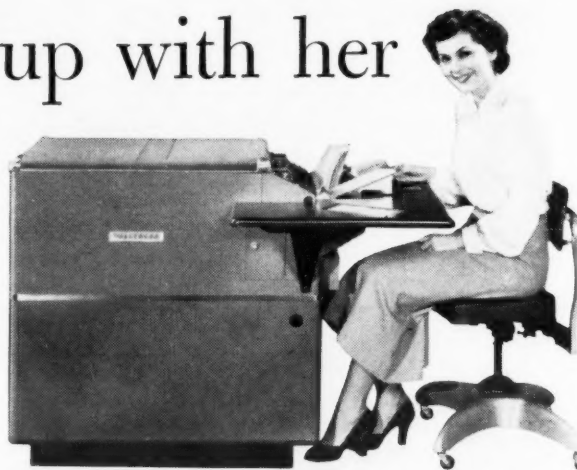
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(Circle 120 for more information)

room for reordering."

answer:

It is advisable to have some positive measure of control rather than leaving it to rule-of-thumb discretion. A stock card is desirable. However, the mechanics of operation can be informal. For example, it may not be feasible to have screws or other factory supplies requisitioned in exact quantities as needed. It is usually more practical to issue bulk supplies, deduct them from the record card, and then requisition purchases when the reorder point is reached. In our own plant we have a

 Tie or tape this part to reserve stock.	
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WARNING!	
Before opening, removing, or using this reserve stock, tear off bottom portion of tag and give to production planning immediately.	
STOCK NO.	DATE SENT TO P.P.
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STOCK NO.	RESERVE QUANTITY
DESCRIPTION	
DATE RECEIVED	DATE ORDERED
QUANTITY ORDERED	PURCHASE ORDER NO.
REMARKS	
SIGNED _____	
CONTROL TAG	

double check on miscellaneous supplies and materials. A reserve quantity (based upon current rate of usage, vendor's lead time, plus a safety cushion) is marked with a colored tape of string, and labeled with a control tag. Before using the reserve stock, the tag is torn off and sent to Production Planning for immediate action. The tag stub indicates that the item has been flagged for reordering. In smaller plants, the tag system alone may be sufficient for miscellaneous items, without the necessity of stock cards. m/m

methods

How safety programs pay off in Lower insurance premiums

by William H. Burhop, President
Employers Mutual of Wausau

Industrial safety is a concern of top management for reasons other than good employee relations. There's a very real dollars and cents angle. Studies have proved that the average cost of an industrial accident to an employer is four times the amount paid out by the insurance company in settlement of the original claim.

A lot of factors are involved: some are tangible, others strongly reflect the human element. There is, for example, the interrupted production which almost always follows an accident. Often, an accident means a breakdown of machinery, which has to be replaced. There is the loss of skilled workmen, and the training of replacement workers, to fill in for the injured, which is costly. There is spoilage of materials which are scrapped at a total loss.

Employee morale can be a major factor in boosting the costs of industrial accidents. A particularly severe accident may reduce worker efficiency to a point where real inroads are made into production schedules. Reduced output often means the inability of a manufacturer to meet critical shipment deadlines, with subsequent loss of faith in him by his customers. Bad publicity following a major accident can seriously affect an industry's community relations problems. If the accident is bad enough, it may cut off the potential supply of new workers for a considerable period of time. Sound accident prevention techniques, then, are more than a problem at the supervisor level. They belong at the top echelons of management.

A reduction in the number of accidents is the only means, short of a reduced payroll, by which an employer can cut the costs of his com-

pensation insurance. A policyholder's rates are largely based on his accident experience rate.

Savings can be substantial. A large Eastern transit company will realize direct savings of about \$25,000 this year, through a stepped-up safety program. In the last four years, this company has realized savings of more than \$55,000.

The average loss in compensation insurance is 60% of premiums paid. If the insured's experience runs to the average, he then pays the base rate for his classification. As his accident experience goes above or below this average, he acquires debits or credits. This means he pays more or less than the average for the same amount of insurance.

The insurance files are full of cases where sound accident prevention techniques have led to remarkable premium savings.

Employees in the black oxide department of a Southwestern plant were being exposed to lead dust, which was being inefficiently vented to cyclone dust collectors located on the roof of the plant. As a result, much of the dust was being dispersed through the neighborhood.

A careful study of the problem brought about a revamping of the ventilating system and the use of bag-type dust collectors. After installation of this new system by the policyholder, at a cost of only \$4,000, it was found that hundreds of pounds of the black oxide were salvaged daily. At the then current price of this material, which was in short supply, annual savings due to salvage amounted to more than \$20,000. Thus, the policyholder effected a very substantial saving in material cost as well as minimizing the hazard of lead poisoning. m/m

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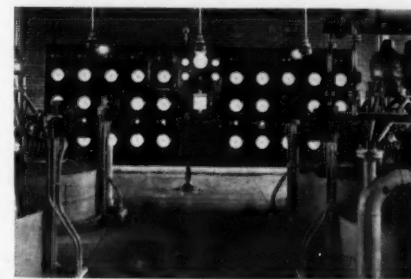
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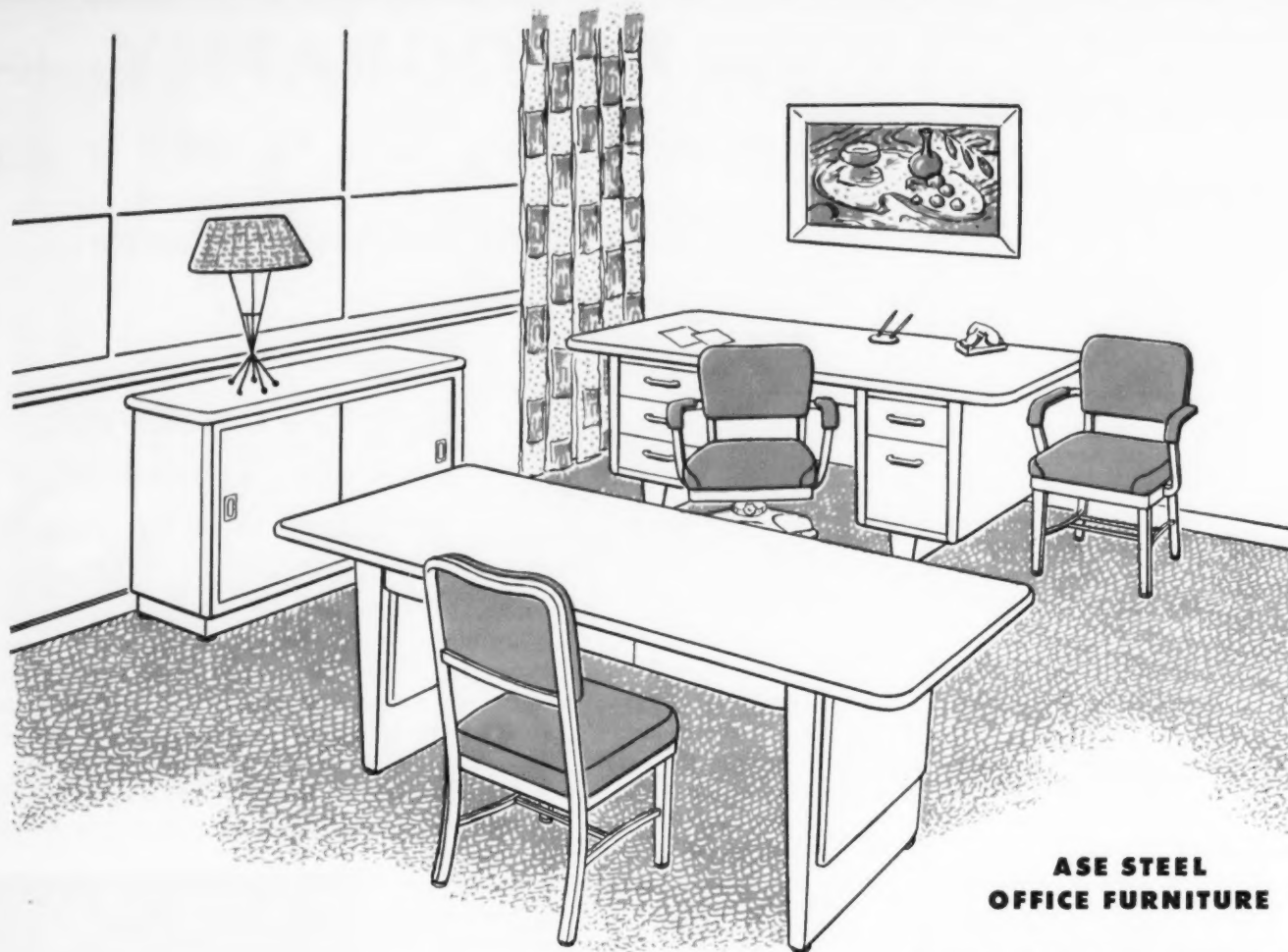
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The Taylor controllers (center) automatically maintain pressure and temperatures in the reactors at this chemical processing plant. Today a large percentage of the company's output goes to industrial plants.



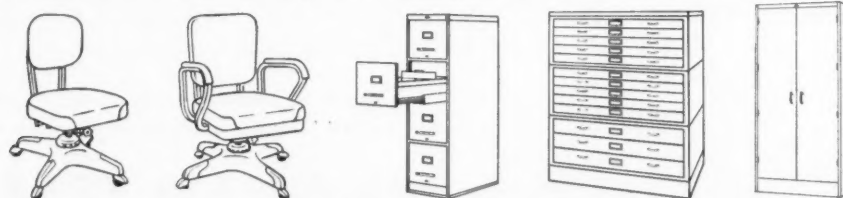


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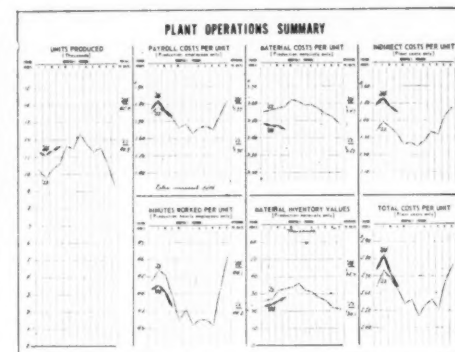
(Circle 163 for more information)

Whiteprinting statistical reports

reduces direct labor costs

A new method of presenting statistical reports has saved the cost department of one manufacturing company over \$50,000 yearly in direct labor costs alone, according to their own figures. A planned operation summary form has been prepared as a master form to visually summarize all operations. It is divided into seven parts. The graphs show the units produced by thousands, payroll costs per unit, material costs per unit, indirect costs per unit, minutes worked per unit, material inventory values, and total cost per unit.

In preparing the film original, the trend index figures are inserted in pencil, allowing for adjustment, as well as



quick and easy insertion of new figures. A matte film is used instead of translucent paper, because it is more durable and reprints faster.

The company now uses this form for all their cost reports with the exception of one recap sheet. Within two hours after receipt of the tabulations from which the graphs are computed, the report consisting of about 18 pages and 30-odd copies, is ready for distribution to management. Through the whiteprinting process, relatively few copies of the originals can be made in very short order, and they can be color-coded for distribution control.

For more information, circle number 244 on the Reader Service Card.

methods

How to develop management responsibility in a decentralized operation

The present trend toward decentralization in business has produced a whole new group of top management training. A plant manager, for example, suddenly finds himself responsible for sales, production, and finance. While the practice may at first seem unwise—even dangerous—it is actually consistent with present thinking in the field of management development. Firms like Westinghouse appoint men to positions of responsibility on the basis of their *potential*—rather than their training. The man is expected to “grow into” his job.

Some form of interim assistance for these tyro managers is needed to help them over the rough spots. One such “crutch,” used by a subsidiary of the highly diversified Rockwell Manufac-

turing Company is a “check list” for management. This check list is astonishingly broad in its scope—almost too broad. It is interesting, however, in two important respects: 1) It indicates the vastly complex job of today's top manager who must have, at least, a working vocabulary covering such widely different subjects as tooling and public relations. 2) It encourages on-the-spot attention to specialized problems, thus increasing the probability of independent action when it is actually necessary.

The following is a statement by W. F. Crawford, President of Edward Valves, Inc., a subsidiary of Rockwell:

“Even though general managers in our company do rely on our headquarters staff for specialized know-how,

management aggressively encourages independent action whenever it's necessary. This means that our general managers (a term synonymous with “plant manager” in our company) have a good deal of latitude in the operation of their plants. Consequently, they've got to prepare themselves for the time when they must be their own industrial engineering expert, their own production genius, or perhaps their own chief engineer. True enough, skeleton purchasing, accounting, engineering, research, and other departments are maintained at each plant—but final decisions on highly technical subjects are a function of the general manager in the absence of a headquarters specialist.

“The fact that the general manager is given considerable latitude in the exercise of his authority, and the recognition that he is management's representative in his plant city, places a responsibility on management to equip him with all the data he needs to make prudent decisions.

“One of the ways we try to do this is by scheduling Management Meetings at periodic intervals. The *Annual Management Meeting*, held early in the year, is attended by all officers, department heads, and staff members, in addition to plant managers and regional sales managers. It serves both as a full-scale review of the year just past, and as an exhaustive analysis of what lies ahead for the coming year. Interspersed with the Annual Management Meetings are more frequent meetings of general managers.

The function of the check list

“A recurring subject at such meetings is ‘What is the function of the plant manager?’ Our policy manual has much to say on this subject. But

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83

CONTROLS FOR ROCKWELL'S GENERAL MANAGERS

PRODUCTION — MANUFACTURING

1. Check low volume items with sales to determine possible eliminations.
2. Eliminate expensive subcontracting.
3. Make a continuing review of excess and obsolete capacity.
4. Control inventory through constant review of economic lot quantities.
5. Rearrange equipment to reduce manufacturing cycle times, which in turn reduces inventory.
6. Reduce in-process inventories through better materials handling.
7. Likewise, successful machine loading procedures require periodic checking.
8. Have your supervisors read trade magazines for efficiency improvement ideas.
9. Read the trade data on manufacturing plant automation.
10. We make most products by removing material. Are you using the right tools and wheels?
11. What do you know about developments for cooling tools?
12. Be sure your new machines are proved by actual use by methods engineers before putting into production lines.

13. Are you using electric power instead of muscles?
14. Chart by flow diagrams the activities of your material handling truckers.
15. Can you possibly use weldments on short run items?
16. If you do or should use welding, have you investigated the new metal arc inert gas process?
17. Will the use of production time clocks increase output on some of your problem machines?
18. List 5 tool types with highest breakage.
19. Remember you and your top men can't introduce a new product on an eight-hour day. If you must work overtime, what's better than on a new product?
20. Make some investigations to find out if your instructions are understood.
21. Run meetings on a strict time schedule.

ADMINISTRATIVE

22. Are you using your office machines efficiently?
23. Are your trucks and mail cars making unneeded trips? (continued next page)

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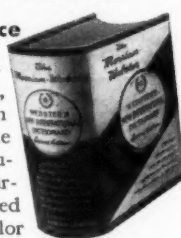
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what the policy manual says is often a starting point—it establishes minimums, so to speak. It's usually the general manager himself who establishes the degree of dependence on, or independence of, the home office that will characterize his operation.

"It was at one of our recent meetings that I was delegated to talk informally about the responsibilities of the plant manager in our company. It occurred to me that there was little point in repeating—or even emphasizing—that which is well stated in our policy manual. It also occurred to me that most of our general managers must be running successful operations—otherwise, in a company that's fully cognizant of profit and loss figures

broken down by plant, they wouldn't be continued in their jobs.

"Confronted with the assignment of an hour's talk, to a group intimately acquainted with day-by-day plant management problems, it seemed to me that there may be some areas not covered by policy statements. There were some situations taken for granted in a seller's market, but hardly tolerable under more competitive conditions, and others about which many of us have become lax.

"The result consists of 83 unrelated points which some have dignified by calling a "check list." It is hardly a check list, because it assumes that the plant manager not only knows how to

24. Use watchmen for other services, such as personal department clerical jobs.
25. Incorporate improvements when re-printing forms.
26. Bring written procedures down to date as needed.
27. Use a letter instead of a wire, and a wire instead of a phone call.
28. Check insurance procedures for inadequate and excessive coverage.
29. Eliminate useless reports and files.
30. Check tax status of intra-plant gasoline, lub oils, coolants, solvents.
31. Investigate status of property taxes.

SALES

32. Furnish sales with better product line profitability data.
33. Boost products with your friends, employees, customers, and vendors.

PLANT AND MAINTENANCE

34. Use plant flow charts to determine actual as compared with correct movements of indirect and service workers.
35. Watch lighting and heating costs.
36. You now have time to install a better preventive maintenance program.
37. Are cotton towels cheaper than paper, or vice versa?
38. Remember long-term trend is toward higher voltages for all your power lines. Europe is ahead of us.
39. Is your floor sweeping and washroom cleaning efficient?
40. Are you buying unneeded electric starting equipment? There is a swing to full voltage starting.
41. Study modern industrial buildings—they use 1 1/2 in. walls, hollow columns for heat and air conditioning ducts, breathing partitions for air circulation, flexible partitions, and lighting.
42. Eliminate all old-fashioned brooms.

PERSONNEL AND LABOR RELATIONS

43. Give due praise and encouragement.
44. Take an interest in each employee as an individual.
45. Place greater emphasis on your interview technique.
46. Show employee he is important because the work he does is important.
47. Be alert to turnover warning signals such as declining production rates.
48. Get to work before the rest of the organization occasionally.
49. Place employee on a job equal to his ability among associates with whom he has something in common.
50. Develop the spirit of teamwork and sense of belonging among employees.
51. There is more absenteeism and tardiness than you think.
52. Investigate all separations. Use the exit interview to discover company shortcomings.
53. Adopt fair promotions policy so that employee feels that he has advancement possibilities.
54. Aid laid-off employees in getting jobs so that your unemployment compensation costs are reduced.
55. Check the washrooms, etc., for loafing.
56. Improve your working conditions if you lag behind your community.
57. Check with other divisions to determine if they have incentive coverage on operations where you don't.
58. Are your foremen working together? Is jealousy present?
59. Perk up the suggestion system with a special contest.
60. Check to see that foremen are passing on the employees' casual suggestions or gripes.
61. Prepare your counter proposals well ahead of union negotiations.
62. Carry the mail when you go to another Rockwell office.

methods

run a successful plant, but that he is actually doing so. This, then, is more of the nature of "how to get that extra dollar of profit" than it is a guide for breaking even.

"My 'points' are broken down into six fairly specific categories, and a seventh "Miscellaneous" catch-all. The six categories are titled Production-Manufacturing, Administrative Sales, Plant and Maintenance, Personnel and Labor Relations, and Purchasing. They are, in the main, a combination of common sense and idiosyncrasy. The fact that they are worth any attention at all seems to be only because a number of our own general managers have indicated they have helped them save money in overlooked places." m/m

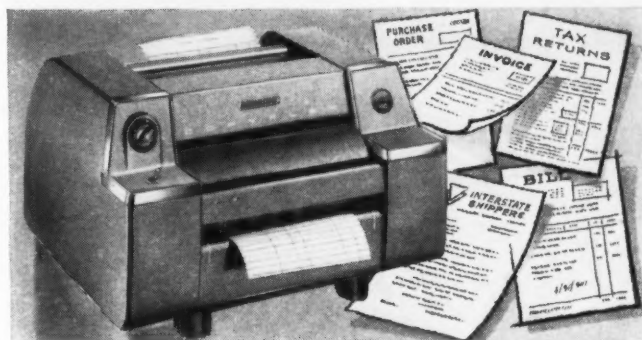
PURCHASING

63. Check your plant storerooms. Are you carrying items no longer in short supply? Use distributor stores instead.
64. Survey cutting oil and lubricant cost.
65. Use weldments where your casting rejects seem unsolvable.
66. Be sure to check performance on taking cash discounts.
67. Minimize rush or emergency purchases.
68. Keep checking on quantity discounts, receiving counts, and invoice pricing.
69. Review your purchasing department's competitive quotation procedures.
70. Review purchase order commitments to control long-term obligations.

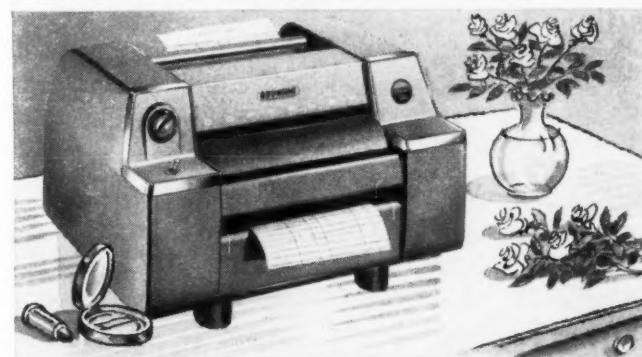
MISCELLANEOUS

71. Institute better control of shipping schedule failures.
72. How does your shipping department make crates and cartons?
73. Is your service department personnel wandering around instead of being sent to the next job systematically?
74. Review your drafting room practices. Are drawings too fancy? Can you use photography to replace slow drafting?
75. Determine what kind of industrial accidents are frequent and take action.
76. Do you know what local politicians and tax assessors are thinking about?
77. Try to eliminate personal pronouns in bulletins and correspondence.
78. Look at the scrap piles regularly.
79. Encourage attendance at local trade shows and technical societies.
80. Find out what the neighbors think about the company and employees.
81. Write to other Rockwell plants for their latest improvements.
82. Stage a truly unannounced fire drill.
80. Read one of the good motion study textbooks from cover to cover. Then evaluate your methods department.

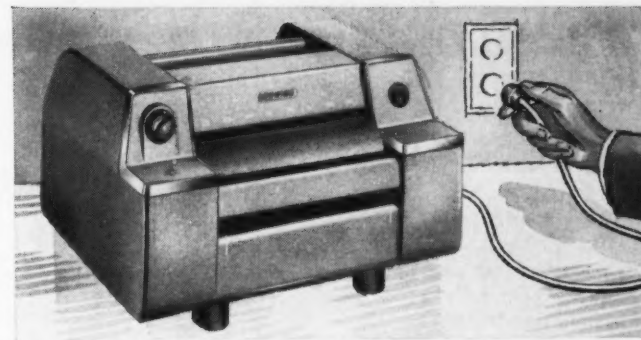
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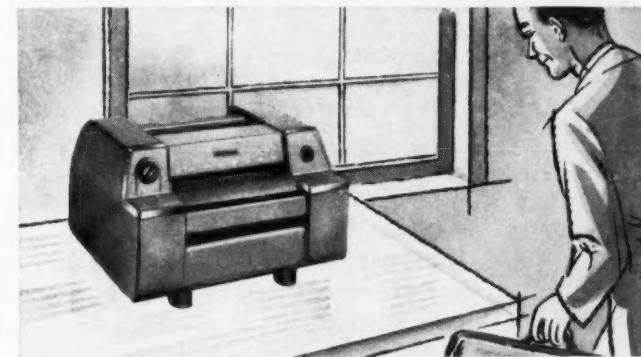
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A Procedure Department in the smaller firm

by Karl H. Klein

Stanolind Oil Purchasing Company

Every company has accounting and treasury or sales departments of some sort, but procedure departments are usually found in the larger companies. Among smaller companies having only a few hundred or even a few thousand employees, the procedure department's work is generally shared by the controller, the office manager, the secretary-treasurer, the chief accountant, and the assistant to the president.

Obviously, then, the procedure staff in the smaller companies cannot take itself for granted as readily as an established procedure department that serves one of the corporate giants. Unless developed cautiously, the small procedure staff may lose its impartial investigative and advisory effectiveness under a load of operating routine.

The care and feeding of the procedure department in our firm has been especially circumspect, since it is staffed by only three people: a supervisor, who reports to the financial vice president; an assistant; and a stenographer. We started out in 1946 as a one-man department, grew to a total of four, then settled back in 1950 to our present number.

The big job of our small department is to serve the company as coordinator of its internal operations. Our company has 220 employees, mostly of the white-collar variety, in 14 field offices and its Tulsa headquarters. It operates in 10 states where it buys, sells, and trades large volumes of crude oil.

Within the company, we move from department to department and from

desk to desk, wherever most needed at the time, in behalf of maximum economy commensurate with effectiveness and proficiency. Within this broad function, our specific functions are:

- (1) To act as coordinator, investigator, and advisor on special problems of procedure usually involving two or more departments.
- (2) To coordinate and supervise the company's records management program that includes:
 - (a) An annual review of each of the company's printed and numbered forms.
 - (b) An annual review of all reports that are regularly prepared by one department of the company for another department or for management.
 - (c) The establishment of schedules and procedures for the retention and destruction of the company's inactive records.
- (3) To write and revise the company's general operating procedure manual, the general accounting manual, the punched-card accounting procedure manuals, and other instruction manuals, as needed.
- (4) To evaluate new office machines for possible applications to each department's particular needs.
- (5) To develop training material out of our familiarity with every department's work.

Our work usually comes to us from section and department heads who bring us ideas that need development and problems that cross departmental borders, and together we work out

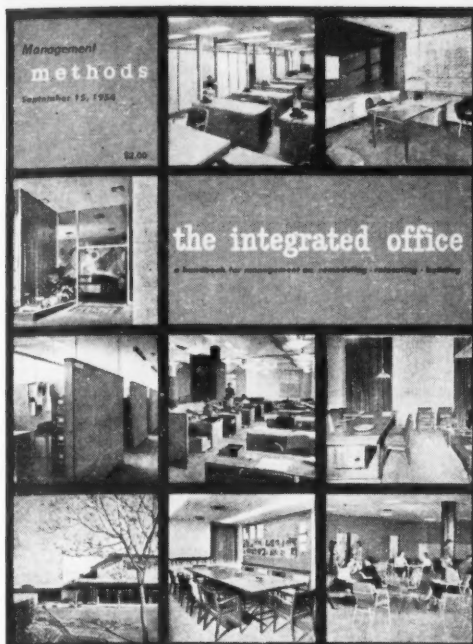
each situation to the mutual satisfaction of all concerned. Management, too, assigns us special studies, and as time permits we ourselves initiate surveys after proper clearance. We like it this way, for then we know that those whose work is affected and whose help we need, are ready and willing to work with us.

In recent weeks, we have assisted 8 departments of our company on 12 special problems. Three of these problems were limited to the requesting department's work, and 9 were inter-departmental. Of these, 6 not only were inter-departmental but required consultation with a number of customer companies that would be affected by suggested changes in our internal procedures. Requests for the review of 10 of the 12 problems came directly from department heads.

One reason we get along so well with the section heads and department managers is our mutual dislike for long reports and complicated diagrams. We do not use stop watches, and our occasional process and flow-charts are simply step-by-step descriptions of how a job is done, written in plain English, without hieroglyphics. If a memorandum will do, we don't write a report. If a conversation will do, we don't write a memorandum.

One bit of paperwork that we like is a list of our special assignments, in chronological order, showing the name of the person requesting our aid, the date of origin, the date of completion, and the departments and individuals consulted before completion. It is

methods



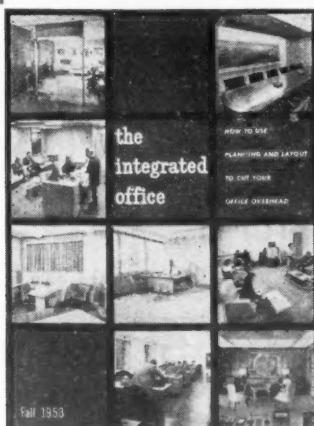
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sometimes tendered uninvited to management, when we feel an evaluation is needed of the work we are doing. It is used by us to make our own evaluation of whether the work we are doing is worth the effort and the expense: Are we doing too many unimportant jobs? Are we spending all of our unscheduled time in only one or two departments? Are we spending too much time on only one or two inter-departmental functions? What are the departments and the operations that seem to require or receive our attention most frequently?

We like this record, too, because it helps us remember that almost every problem extends across a surprising number of departments to the desks of a surprising number of individuals. This encourages us, because it reflects the highly specialized, inter-dependent nature of the departments in our company and of the jobs within each department. It is this inter-dependent specialization, we believe, that creates a clear and permanent need for our procedure department, or for some similar and equally effective coordinator of internal operations.

PD IN A SMALL FIRM

1. Records management

Our company uses 160 printed forms in its offices and 240 report forms, excluding more than a hundred that are prepared solely for some agency of state or federal government. Our object in reviewing all forms and reports, of course, is to weed out and keep out those that are unnecessary and to improve those that are needed. Our cradle-to-grave program seeks improvements in (1) design, (2) printing and preparation, (3) distribution, (4) use, (5) filing, and (6) storage and destruction. During the first round of paperwork simplifications, savings were found rather easily in each of these 6 stages. Now we find that the printing and preparation of forms and reports is the phase most productive of savings, due to the new processes and equipment marketed in recent years.

Recently, we decided it was time to switch our efforts from the elimination of unnecessary paperwork to the im-

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provement of the so called unavoidable paperwork. In fact, we decided we would fight paperwork with paperwork and created some new "records control records." These are simply analysis sheets, one for each form and each report. Each sheet basically is a check list of things to look for and think about when reviewing a form or report, plus identification of the form or report by name and number, plus a statement of its purpose, a record of the quantity (of forms) last ordered, and the names of the individuals consulted in completing the review.

This record, like our list of special assignments, is also used to determine the number of individuals and departments that prepare and use each form and report, and whose ideas, problems, and efforts need coordination. Each of our 240 reports, for example, is used by an average of 4 different persons, in addition to the person who prepares it. Our analysis sheets also help us keep each review from wandering, or from coming to a stop before a thorough analysis is made.

PD IN A SMALL FIRM

2. Forms and reports control

The form analysis sheets are kept in a book that is divided by departments, with each sheet filed in the section for the department that prepares the form. This isn't exactly a functional file but it fills our need. One section of the book is for forms that are prepared by more than one department. We also have, of course, a numerical form file that contains samples of each form, approved drafts of new forms, and related data such as old analysis sheets that are replaced by new ones on the occasion of each annual review.

Our company's forms control procedure provides that when pre-determined minimum quantities in stock are reached, we are to be notified by the stock room. The minimum quantities are set to provide a 6-month interval between orders of some forms, a year's interval for others, and our analysis sheets are set up on an annual basis. The result is that each form gets a thorough going-over at least once a year, and for some forms the

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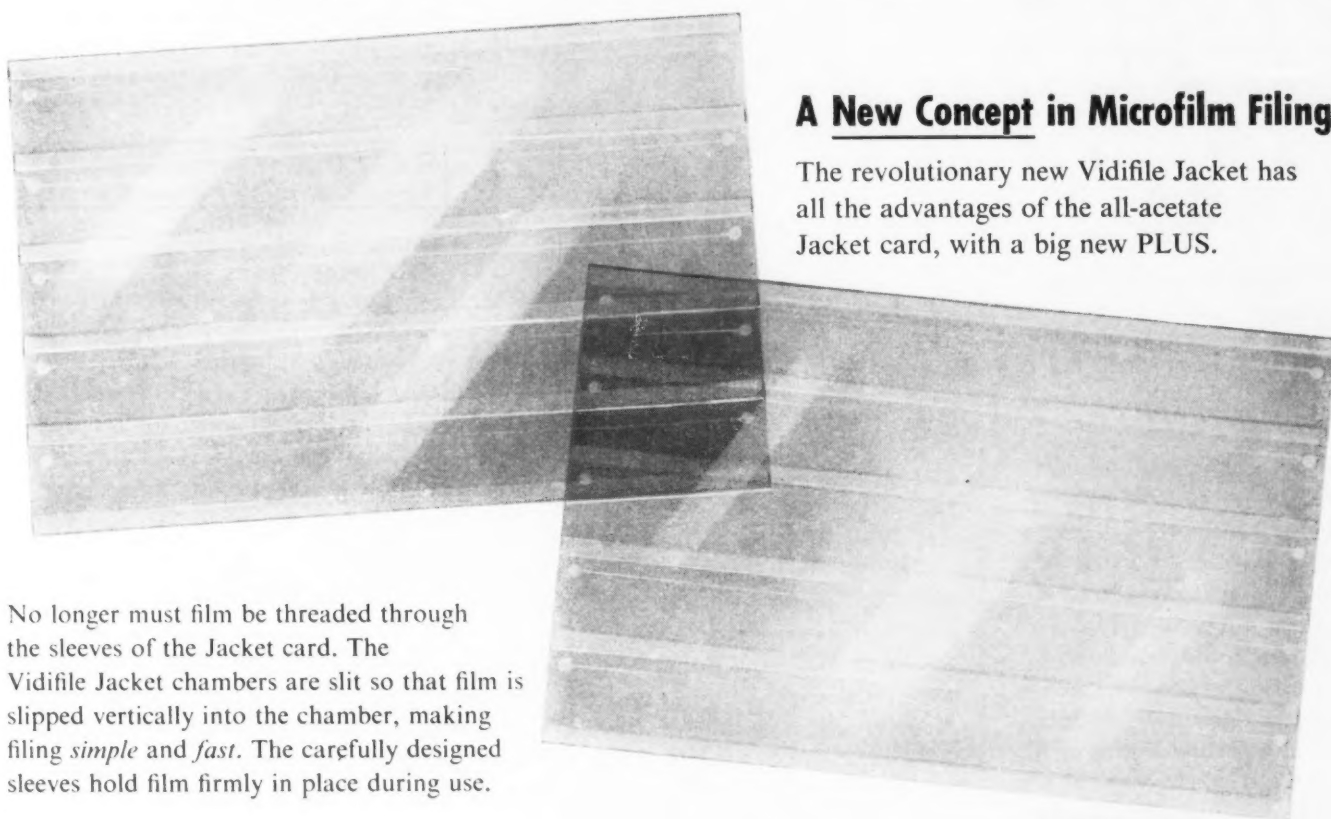
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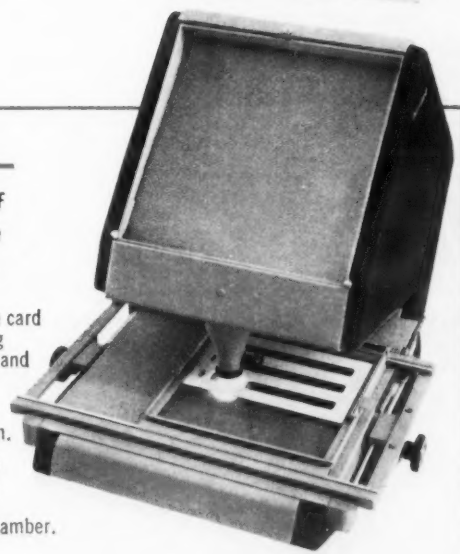
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check-up comes more frequently.

In addition to our report analysis sheets, we have a control record that consists of one sheet for each report, showing name and number of the report, name of the department and of the section that prepares it, scheduled interval and date or dates of release, and the names of those individuals (by title) who receive copies. The analysis sheets and control sheets are filed in similar manner—by department, by scheduled interval, and by assigned number. One sheet could do for both records, except that we know from experience that a new analysis sheet must be prepared at least once a year, while the control sheet on some reports will go along for years without change. Moreover, copies of each control sheet are held by the interested departments, while the analysis sheets are just for the procedure department's use.

Each report has a control number that is handy for reference, particularly since we have found it difficult to give many reports names that are neither long nor ambiguous. Each control number has a prefix letter for the department that prepares it and a prefix number indicating its scheduled interval. Thus, "A2-6" is recognized as an accounting department report prepared each week, "C4-6" as a semi-annual contract department report, etc.

PD IN A SMALL FIRM
3. Record retention, destruction

The company's active files are the responsibility of the department creating or using them. In a small company like ours, with numerous small, highly specialized departments, we have never felt the need for central files, although there are several hundred file drawers filled with current records. Apparently the decentralization of our files works, for we hear no complaints that files can't be found when they're needed.

Our function, with respect to the company's inactive records, simply is to see that a satisfactory compromise is reached between prudence and economy in their storage and destruction. The day-to-day transfer of some to storage drawers and others to microfilm, and their eventual destruction if



New uses for punch cards!

You may not want to paper your walls with punch cards, but it's getting to the point these days where you can use 'em for practically everything else. The new Cummins Carditioner now makes it feasible to put time clock cards, payroll checks, dividend checks, money orders, proxies, bonds—a whole host of things—on punch cards.

Heretofore, it was impracticable to use punch cards in many instances because of the cost and bother result-

ing from damaged cards. Rumpled edges, creases, staples, paper clips, cellophane tape—all caused no end of trouble, jammed sorting machines, required costly, time-wasting hand sorting.

But the new Cummins Carditioner puts an end to all this. It "irons out" rumpled punch cards, restoring them to usable condition. And it rejects those with foreign objects attached—all at a rate of 275 cards per minute! It virtually eliminates hand sorting, does away with any chance for human error, gets jobs done faster, better.

For full information on this amazing new machine that makes punch cards practicable, mail coupon below.



◀ Cummins Carditioner restores imperfect punch cards to usable condition. Permits use of modern, efficient tabulating equipment.



**Cummins
Business
Machines
sales and
service offices
in principal
cities**

Cummins
IN BUSINESS AND BANKS SINCE 1887

CUMMINS BUSINESS MACHINES
Division of Cummins-Chicago Corp.
Dept. MM-25, 4740 N. Ravenswood Ave., Chicago 40, Ill.

Please send me full information on Cummins Carditioners.

Name

Name of Business

Address of Business

City State

(Circle 115 for more information)

they are not scheduled for permanent retention, are guided by written instructions that we prepared several years ago and now are part of the general operating procedure manual.

One result of our studies on this subject was the allocation of specific storage space and equipment to each department, and now about the only time we are brought into records storage and destruction matters is when this space or equipment becomes unsatisfactory to some department. Then re-shuffling or enlarging the space and equipment, or a revision in the procedure, may be necessary.

PD IN A SMALL FIRM 4. Procedure manual

There are 36 general operating, 24 general accounting, and 68 punched-card accounting procedure letters, in addition to 2 short manuals of instructions on the measuring, sampling, and testing of crude oil.

New procedure letters are rarely required now, and most of our work on the manuals is to keep them current and study them for better style or for improvements in the procedures.

Instruction manuals, we have learned, are more important before they are written than after. It is the investigations, discussions, and decisions necessary before approved procedures can be issued or revised that keep our departments working together as a team. Of course, manuals are also useful after they are written. One way our company uses them is as a training guide, and for this reason we always preface each instruction letter with "general comments" that explain the need for the work outlined and where it ties in with related work described in other instruction letters.

We review each procedure letter once a year, using an analysis sheet very similar in purpose to the form and report analysis sheets. Like the latter, the procedure letter analysis sheets are used, among other things, to designate the different departments and individuals consulted to perfect each procedure and keep it current.

Before our analysis begins we circulate each letter, and a questionnaire,

to the department heads affected by the instructions. The questions are few and simple: (1) Does any instruction conflict with actual procedure? (2) Is any instruction incomplete or confusing? (3) Have you any ideas for improvements? Each question is followed by a space in which the troublesome instruction can be designated by page and paragraph number and by the name of the person to see about it. Thus, the busy department head doesn't have to think out his criticism in detail or write it down. He knows one of us will come by to discuss the problem or improvement at his convenience or at the convenience of the person he designates.

PD IN A SMALL FIRM 5. Office machines and services

We welcome the office system forms and equipment salesmen and rely on them to keep us posted on what's new. When evaluating new equipment, we make our own studies of comparative costs and performance, and frequently find that the best way to save money is to spend money for the new models or different machines. An electronic punched-card calculator, advanced models of other punched-card equipment, a photocopy machine, a microfilm camera and reader, a suction-feed addressing machine, and a continuous forms burster, are examples of purchases or rentals the company has made on the basis of our studies.

We rarely compare the cost, performance, or necessity of ordinary typewriters, adding machines, calculators, or filing equipment when request is made for their purchase, and we have nothing to do with office furniture. These items are requisitioned and ordered, if approved, in accordance with written procedures, and the purchasing agent works with the users in making each selection. Also out of our province are such office services as mailing, duplicating, and supplies.

PD IN A SMALL FIRM 6. Training

In addition to preparing procedure manuals that have definite training

methods

value, we prepare flow of work charts and written descriptions of departmental functions that are used in briefing key employees of affiliated companies who are sent to us from time to time to learn about our company's organization and operations. The short course that we have developed for these students lasts two days. The offices of our department heads are the classrooms and there is a written schedule to follow as the students proceed from one room and one subject to another. The text book is a 3-page outline and diagram of the company's operations and organization.

PD IN A SMALL FIRM 7. Employee relations

We are not the employee relations department of the company, and human relations is not our specific responsibility, yet we cannot avoid it. As a matter of fact, we have a dynamic employee relations opportunity that is not available to any other department, for sooner or later we interview every employee and talk with him about what every employee is eager to talk about—his job and its importance to the total effort. This visit may be while we are investigating the details of some special problem, or while we are tracking down the need for a form or a report, or while we are writing a procedure or studying the uses of a new machine, but eventually, once a year at least and usually oftener in the general office, we sit down with and ask for the help of every employee.

Everyone likes to have someone seek his views, especially on a subject as familiar to him as his job. But someone is needed to ask him, to listen, and to do something about the ideas he unloads. That asking, listening, and doing is our procedure department's best and biggest job. No other effort we exert is more productive insofar as simplifications and savings. It is employee relations at its best.

Ours is a unique opportunity to keep alive throughout the company an appreciation of the many inter-dependencies on which the company's operations rest. We know we can make a major contribution to the company's human relations, provided we are

Another reason why Hammermill Bond prints better, types better, looks better

ANY TIME you reorder white or one of the 12 Hammermill Bond colors, you get a match for the shade you first selected, maybe many months ago.

A sample of each new Hammermill color is put into a scientific instrument, the spectrophotometer. A beam of light, broken into a spectrum, sorts out the separate hues that combine to create the new color. Then both the wavelength and amount of each hue are recorded in black and white on a graph to provide a permanent record.

Fresh samples are graphed periodically on the spectrophotometer, each new graph checked against the original. Most mills must rely on paper samples, which fade in time. Hammermill records colors *permanently*.

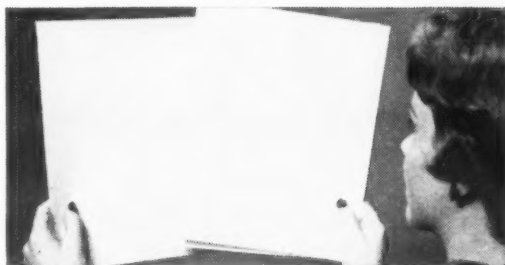
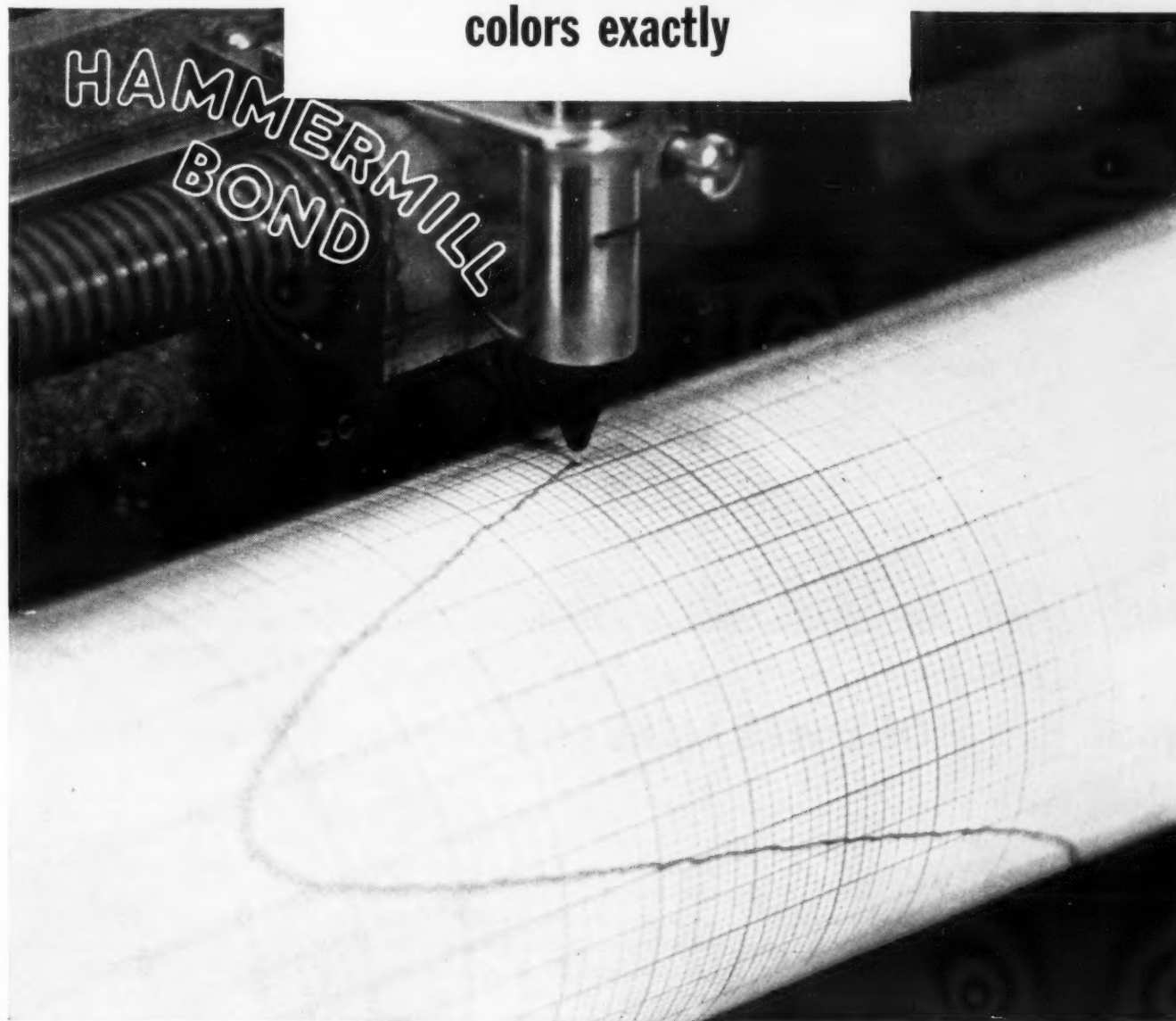
We pioneered the use of this costly

technique because it's the only way to be sure you get the shade of paper you expect, order after order. It's just one of the hundreds of quality controls that make Hammermill Bond (1) *print* better, (2) *type* better, (3) *look* better. You'll find office work goes more smoothly when you choose Hammermill Bond for your business printing.

You can obtain business printing on Hammermill papers wherever you see the Guild shield on a printer's window. Hammermill Paper Company, East Lake Road, Erie 6, Pa.



Rainbow in black and white helps Hammermill match colors exactly



... yet

**HAMMERMILL
BOND** costs no more

—and actually less than many other watermarked papers

(Circle 167 for more information)



A typical TECHNIPLAN arrangement for efficient departmental set-up.

you'll find GLOBE-WERNICKE office equipment everywhere!

Globe-Wernicke TECHNIPLAN is the original modular steel office equipment. It applies modern principles of design and engineering to the problem of your particular office layout. TECHNIPLAN allows you to utilize to the maximum a given amount of space, and at the same time increase personnel comfort and efficiency. With TECHNIPLAN'S flexibility, an almost unlimited number of arrangements is possible, and group-

ings can be tailored to insure easy communication with convenient desk-to-desk work flow. Free-standing partitions are available to form ideal private offices, executive suites or departmental sections. TECHNIPLAN means modern appearance...maximum efficiency in your office. Your Globe-Wernicke dealer will be glad to demonstrate TECHNIPLAN. He's listed in the "Yellow Pages" of your phone book. Or write us direct.



CINCINNATI 12, OHIO

MANUFACTURERS OF THE WORLD'S FINEST OFFICE EQUIPMENT, SYSTEMS, FILING SUPPLIES AND VISIBLE RECORDS
(Circle 126 for more information)

sensitive to the rights, reflexes and desires of human beings. We know too, that if we conduct ourselves carelessly, then like a locomotive that leaves the track, we will be mainly disruptive. To help us remember this, and to be certain we reach everyone in the general offices, we have a list of general office employees. On this list we note the date or dates we have checked some form or report or procedure with each person. The names of those individuals we have not talked to soon stand out and it is never difficult to then find a good reason for a visit to solicit their aid. This is dynamic employee relations, and the best suggestion system.

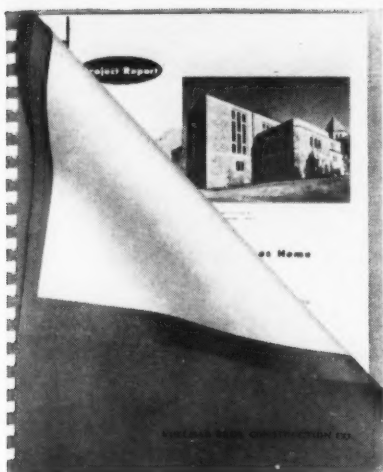
Human relations opportunities in systems and procedures are not peculiar to our company or to our procedure department. They exist in every procedure department regardless of its size or how big and how good the employee relations department is.

In the early days of our department the job was to dig a new channel where the company's internal operations would flow forcefully between maximum effectiveness and maximum economy. In that heavy digging, a lot of savings were discovered that won't be found again unless we *continue* to keep the channel open. Keeping the channel open, we find, or re-routing it, as changes occur like shifting sands in personnel, policies, laws, customs, costs, and equipment, is a different proposition than the original digging. It is a matter of preventive maintenance, which seldom produces spectacular savings, but "an ounce of prevention" holds here.

Like every other department, the procedure department needs the full support of management. More than other departments, the procedure department needs the confidence of the other departments. Looking now beyond these fulfilled needs for the reasons our small department stays in business, we find these three:

- (1) Full use of the informal ease with which a small procedure department can function.
- (2) Full use of the outstanding human relations opportunity in our work.
- (3) Keeping the department small, the job big, and the work free of operating routine. m/m

methods



Tell the whole story with Sales brochures

by Joseph E. Vollmar, Jr.
President, Vollmar Bros. Construction Co.
St. Louis, Missouri

We have received extensive publicity from unique and unusual projects we have undertaken on the Mississippi River. This has given the impression that we were river and marine specialists only—a notion we must continuously dispel.

Our company growth has been steady and solid, with a conservative policy of rendering construction service to a limited area of three states. More and more, we found that we were becoming "river contractors." Even some of our early clients were saying, "I didn't think you did land work any more. . ."

Our problem was one of demonstrating that we were interested in all

types of industrial and commercial construction. Through a carefully prepared loose-leaf brochure, we assure our prospective client that we are the type of constructor he desires for his particular project. The brochure makes great headway for our program.

The first page of the brochure consists of a letter, on our letterhead, individually addressed to the prospect. It is a brief description of our company, the services it offers, and our philosophy of operation. Page two includes a short recapitulation of our philosophy of operation, in the form of an "endeavor," and a list of substantial and highly respected companies

whom we have served in the past.

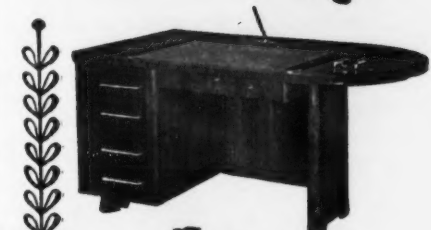
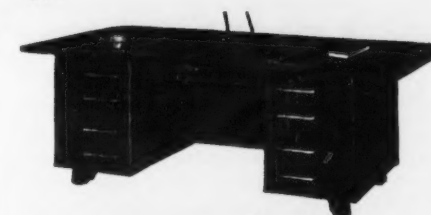
Following these two pages, individual sheets show photographs of completed projects similar to that intended to be constructed for our prospective client. These sheets are called *project reports*. Usually included, are several of these reports of other types of projects to show our company's versatility.

The next few pages list the major items of equipment owned by our company. Marine and land facilities are listed separately, and are used according to the scope and type of the intended project.

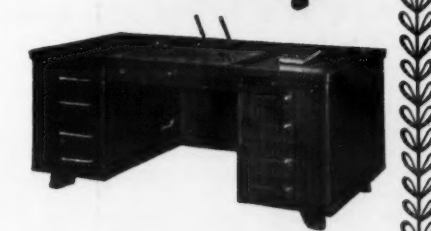
The entire brochure is included in a folded cover, imprinted with our company name. The written material and project reports are assembled in the desired order, punched with a plastic ring binding machine, and bound with the plastic rings.

Actual presentation to the client is made in person if possible; otherwise, it is sent by first class mail with a brief note telling the client what the brochure contains. If the brochure is presented in person, an attempt is made to review it with the client quickly, insuring a complete inspection by him at least once and arousing his interest enough to review it after our representative departs. The actual cost of the brochure is negligible, compared to the inquiries and completed contracts which we have received as a result of it. m/m

Several standard pages which can be used within a presentation of a similar project.



by
Imperial



... a carefully planned grouping of handsome, modern office furniture . . . styled to lend beauty and luxury to your office without the sacrifice of efficiency. See your Imperial dealer or write for particulars.

IMPERIAL DESK COMPANY
Evansville 7, Indiana

(Circle 131 for more information)

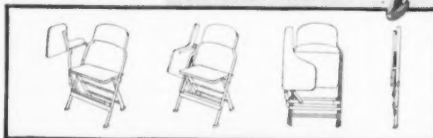
Learn about Amazing New Office Space Stretcher

EXTRA Seating and Table Space at a Moment's Notice

The new Clarin Tablet Arm Chair that folds combines table and chair in one. You'll be amazed at how many people you can seat comfortably in a small office—and give each of them table space as well. Thus, you can hold those important group meetings in almost any office—and arrange it in a few moments. This space-saving chair is quality built—gives years of service—folds flat to 3-inch depth for fast, safe stacking in a minimum of space. Foam rubber cushioning if desired.

Write for full information:
Clarin Mfg. Co., Dept. 47,
4640 W. Harrison St.
Chicago 44, Illinois

FOLDS FLAT IN 3 EASY STEPS

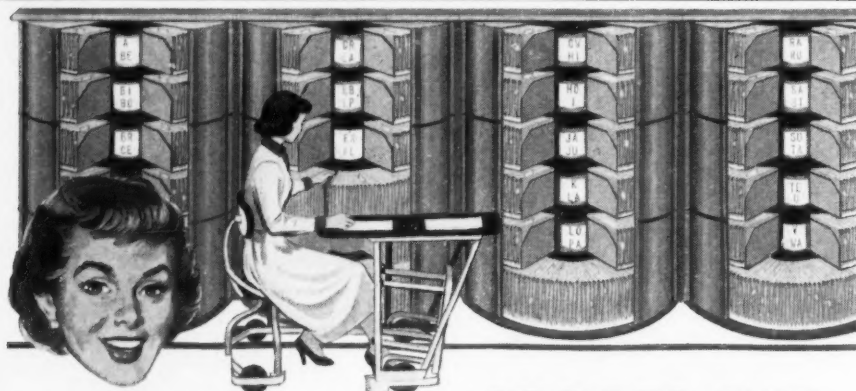


Clarin

There is a Clarin Steel Folding Chair for your every need.
New FREE Catalog of complete line on request.

ENGINEERED QUALITY MAKES THE BIG DIFFERENCE IN FOLDING CHAIRS

(Circle 112 for more information)



"I hated filing too, before **CORRES-FILE..** now it's laborless filing — and in half the time!"

For 60 long years the 4-drawer file has been a necessary evil — since 1893 filing clerks have been pulling, pushing, stretching, stooping, kneeling, squatting — performing more like gymnasts than office workers. No wonder the personnel turnover for filing clerks is the highest — and comparative efficiency the lowest. But, at last, filing drudgery can be eliminated. Office modernization can

include the filing system too — because Corres-File has become a reality. Designed to fill a vital and specific need, Corres-File eliminates more than 50% of clerical operating time — this brings your filing operation up to new heights of filing speed, efficiency — and economy. Send today for complete information.

THERE'S A CORRES-FILE NEAR YOU - ASK FOR A DEMONSTRATION TODAY!

**EFFECTIVE TOOLS FOR
EFFECTIVE MANAGEMENT
WASSELL
ORGANIZATION, INC.
WESTPORT, CONN.**

(Circle 179 for more information)

I'm interested in knowing more about Corres-File
—and how it can save for me.

Name
Title
Company
Address
City Zone State

thought starters

Thought Starters deal with a "practical solution to a management problem." The Editor invites contributions—which are paid for at our normal space rates.

SYSTEMS

thought starter

Standard equipment utilized in mechanized system of posting

The executives of the Bankers Trust Company, New York, recently replaced the costly hand posting of their more than 100,000 installment loan accounts with an economical and efficient mechanized system of posting. About a year ago, the bank's methods engineers went to work to find a system involving no specially built equipment. They developed a completely mechanized system that operates with standard electronic equipment. This system greatly reduces the time and cost of installment payment and recording operations, and makes more detailed information more readily accessible than was possible with previous systems.

All required data is obtained from the customer's approved application form. Thereafter, processing follows a simple, mechanical route. First, an operator cuts a punched card for the name and address of the new borrower. A second punched card, the detail card, is created to provide all data covering type of loan, size, length to maturity, discount, application and loan numbers, and a code putting the loan into one of the six standard monthly "due date" categories.

These two cards provide the bank with all the information needed to carry on with the establishment of ledger cards, coupon books, payment records, delinquent notices, collection lists, and all other supplementary information. From these records, loans can be quickly listed according to dealer, branch office, type, due date, and in many other ways. Unearned discount may be calculated without delay, and trial balances taken off at any time, without interrupting the work flow.

The borrower receives a coupon book, pre-punched with the necessary information about his loan, and a sup-

ply of reply envelopes. Each coupon, when returned with his check or other remittance, is used in the machine to create his payment record and to create a new balance card. Odd payments are "mark sensed" with the amount received, and they are thereafter electronically interpreted.

An historical loan payment ledger record permits posting of four accounts simultaneously, by a facsimile process. For this purpose, the system provides that four accounts of similar maturity share an identifying number, differing only by a single code digit. The new method thus requires the physical handling of only one-quarter the number of records as previously.

Automatic segregation of delinquent account cards results in systematic and automatic mailings of first, second, and third notices, as well as a daily listing of collection items (to forestall legal collection difficulties when an account makes a late payment).

One of the chief benefits of the system is the elimination of volume overtime involved in hand posting to ledgers. This was necessarily done nights or Saturdays, when ledger cards were not in use for other purposes; in taking trial balances, Saturday overtime often ran to 600 man hours.


Another advantage is the availability of a detailed analysis of outstanding loans on short notice without interrupting the daily work flow. Organiza-



methods

tions making use of installment loan accounting can advantageously apply this system if they are servicing upwards of 50,000 loans.

TRAINING

thought  starter

Firm teaches employees use of instruments they help make

To acquaint office and production employees with the customer's viewpoint on the surveying instruments they help make, W. & L. E. Gurley, engineering instrument maker, staged two-day short courses, open to all employees, on a voluntary basis.

Each meeting opened with a lecture on the general principles of surveying, and the use of surveying instruments.



Actual field problems were solved with the aid of instruments the employees had made. Each participant received a text book as a background guide.

Management has observed an increased understanding of the customer's needs on the part of the employees, as well as a greater familiarity with the over-all manufacturing process.

RETAIL

thought  starter

Point-of-purchase packaging influences sales potential

Aware of the influence point-of-sale packaging can exert on retail profits, department and retail stores are showing increased interest in the development of good packages. Store counters have become a proving ground for these packaging ideas.

Not all packages are equally effective. By the reactions of his customers,

february 1955

REYNOLDS & REYNOLDS ACCOUNTING MACHINE FORMS SPECIALISTS!



You bet . . . it takes a specialist to produce accounting machine forms that protect the efficiency of your accounting machines. If your present forms do not record all the information you desire, if they do not provide perfectly legible copies, if you want *Precision-made* accounting machine forms at an attractive price . . . call in the specialist, your Reynolds & Reynolds Representative.

WRITE TODAY FOR COMPLETE INFORMATION!

THE REYNOLDS & REYNOLDS COMPANY

BUSINESS FORMS SINCE 1866

PLANTS: DAYTON, CELINA, OHIO; DALLAS, TEXAS; LOS ANGELES, CALIF.

OFFICES IN MOST PRINCIPAL CITIES

(Circle 150 for more information)

however, the retailer can tell if a package does its job of showing the merchandise to advantage, naming its selling points, and suggesting added items. The retailer is in a position to advise and guide, in order to shape the course of future packaging developments.

National Retail Dry Goods Association's magazine, STORES, emphasizes the importance of putting the key facts about the merchandise (size, style, or whatever it may be) in bold type at the top of the package and on its face, so that "the essential information remains

in plain sight of the customer, whether the packages are stacked, racked, or fanned out on a counter."

The STORES research report lays down other principles: including visibility, through uncluttered transparent wraps or transparent windows; folds that reveal important features at a glance; schematic drawings to take the place of such folds when they are impossible. The value of the package in enhancing goods of high quality is also brought out. The materials and the methods used in packaging should

reflect the quality of the merchandise.

Beyond the package's ability to protect clean, white merchandise, the package serves other functions:

1. It saves clerk-time lost in re-folding soft goods or polishing metalware and gift items.
2. It eliminates the need for shelf boxes and thus reduces shipping costs for manufacturer and retailer.
3. It economizes on stock space.
4. It encourages customer take-with transactions.

COPYING

thought  starter

A small camera integrates reproduction processes

Joseph H. King
Comptrollers Staff
Continental Casualty Company
Chicago, Illinois

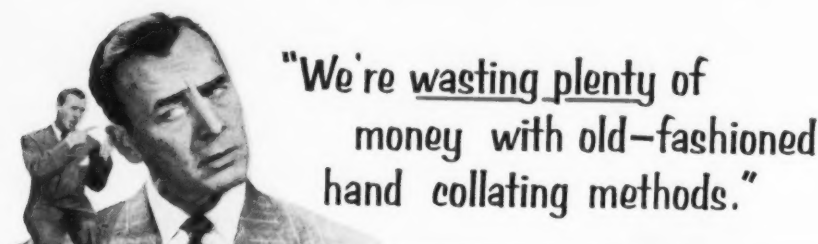
A comparatively recent addition to office operation and procedures has been the reproduction department



which resulted in a savings of time and money, and better quality control of everything from office forms to advertising literature.

Most of our copy preparation, negatives, and printing plates were formerly made by an outside supplier. Since our purpose in establishing our own reproduction department was three-fold, namely to realize savings in money and in time, and to give us better control of the operation and the finished product, we were still lacking in the realization of these objectives. The quality of outside work was not always up to the standard we had set. We then had to either use the plates and be satisfied with the quality or have them remade and lose valuable time.

Through a systems and methods



"We're wasting plenty of
money with old-fashioned
hand collating methods."

"The way I figure it,
it's costing us
5 times more
than it should!"



"Take my advice...
get all the facts about a
Thomas Collator today!"

We're all aware of the time and energy consumed by the task of hand-gathering sales bulletins, price lists and other duplicated papers into sets. However, what many of us fail to realize is that hundreds (and sometimes thousands) of dollars are wasted annually because of old-fashioned hand-collating methods.

But now you can reduce time-waste and increase collating efficiency as high as 500% with the new,

simple-to-operate Thomas Collator. And it doesn't matter whether your office spends 2 or 200 hours a week collating — a Thomas Collator will save you time and money and pay for itself fast.

Get all the facts. Simply drop us a note today and we'll send you free informative literature plus a helpful collating analysis sheet. There's no obligation, of course.



Floor models are also available with capacities of from 5 to 32 bins.

Thomas Collators, Inc.

Specialists In Paper Gathering

155 Sales & Service Offices From Coast To Coast

50 Church St., Dept. D, New York 7, N. Y.



(Circle 156 for more information)



just phone
manpower Sue
for
TEMPORARY HELP!



Dial your problems away. Manpower, Inc. will solve all of your temporary and peak period problems.

Call us for...

- ★ TYPING—STENOGRAPHY—CALCULATING
- ★ ALL TYPES OF OFFICE WORK
- ★ DIRECT MAIL HANDLING
- ★ MARKET SURVEYS
- ★ PREMIUM DISTRIBUTION
- ★ CONVENTION SERVICE
- ★ TELEPHONE SECRETARIAL SERVICE

... OR

- ★ LOADING OR UNLOADING
- ★ WAREHOUSE WORK
- ★ GENERAL LABOR—FACTORY WORK
- ★ MATERIAL HANDLING
- ★ CLEANING AND MAINTENANCE

SAVE MONEY!

Manpower handles all Payroll, Record Keeping, Taxes and Insurance. You eliminate Advertising Costs, Workmen's Compensation and Unemployment Claims, when you use Manpower, Inc. Use Manpower Employees in your office or ours for 4 hours, a day, a week, a month or longer.

NEW! SALESPOWER!

Manpower, Inc. is affiliated with Salespower, Inc., a unique national sales and merchandising organization with offices coast to coast. Use our offices, supervision and sales force to sell and merchandise your products. You produce it — We'll sell it! Locally, Regionally or Nationally. We also maintain an experienced telephone sales staff to serve you. Let us increase your sales and reduce your selling costs. Write for free information.

FREE

Write Dept. MM-F Manpower, Inc., Milwaukee, Wis., for free booklets.

- ☐ "Get that Job Done."
- ☐ "Salespower."
- ☐ "Tax Savings under the 1954 Revenue Act."

Over 40 Branches
Coast to Coast

manpower
Nation's Largest Complete
Business Service **inc.**

(Circle 134 for more information)

New Booklet tells of...

160 Ways to Use AUTOMATIC TYPING

Get
Your
FREE
Copy



It's no secret that individually typed letters bring better results. But hand typed letters can become very expensive when used in volume for routine correspondence or direct-mail selling.

Automatic typing of personalized letters by Auto-typist equipment is the economical solution. Just how automatic typing can be used to cut costs and increase returns is contained in the 16-page booklet, "How to Use the Auto-typist." Present applications by business, industry and institutions are listed along with comments on the equipment. Fill out the coupon to receive your copy.

Auto-typist

World's Largest Manufacturer of
Pneumatic Typing Machines

AMERICAN AUTOMATIC TYPEWRITER CO.
Dept. M-2
614 N. Carpenter St., Chicago 22, Ill.

Gentlemen:

Please send me a copy of "How to Use the Auto-typist."

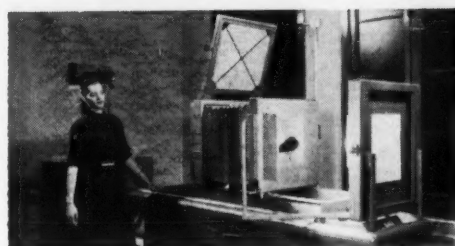
Name

Company & Title

Address

City Zone State

(Circle 104 for more information)




check, we were convinced that the installation of a small camera could help us achieve our objectives. We installed a new type small camera, specifically designed for economic and simplified operation. A girl was instructed on the use of the camera, and we began using the camera immediately.

At first we used the camera exclusively with film, copying original line work prepared by our printing, advertising, sales promotion, and engineering departments. A constant check was made showing the amount of production, the cost, and the quality of the output. When we were certain that this part of the operation was working smoothly, we began copying photographs and more complicated work. At present, we use this camera in the preparation of nearly all of our masters and plates for the reproduction and duplication jobs.

Although our printing department is comparatively small, the practice of producing our own offset plates realizes an annual savings of \$3,500. These figures, of course, include supplies, salaries, overhead, etc. This installation, including the cost of the camera (depreciated over 12½ years), and the other miscellaneous original installation costs, paid for itself in 6 months.

For more information, circle number 246 on the Reader Service Card.

SAFETY

thought  starter

On-the-spot dictation speeds engineering field inspection

Felix L. Elkins, Vice President
Pan American Casualty Company
Houston, Texas

Our field safety engineers use portable dictating machines for on-the-spot preparation of inspection reports and recommendations. Thus, reports are

dictated "on the ground" while notes are fresh. In this way, fewer items are overlooked or forgotten.

The records usually contained in the reports are mailed to the office the same day the inspection is made, where they are promptly transcribed. This speeds up review of and action on them in the home office. Because reports can be dictated rapidly, right on the job, at least 30% more inspections per day may be completed.

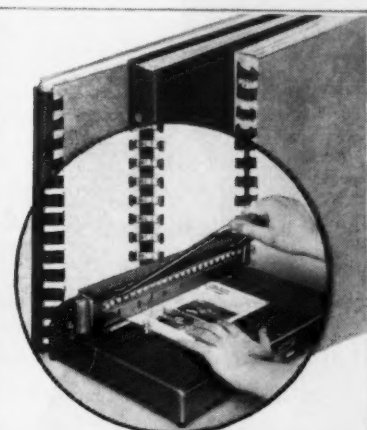
Often, reports are dictated in the presence of the insured or his super-

visor. Our engineers frequently pass their microphone to the insured for any comments he may wish to make. This results in good public relations.

I believe that insurance companies receive at least 40% more information in their engineers' reports when they are dictated right on the location where the safety inspection is being conducted. This procedure prevents the usual loss of valuable details that occurs when the field man waits until the day's end to prepare his reports, when he is working from scanty notes made

NOW..you can PLASTIC BIND *and* LOOSE-LEAF BIND

catalogs — reports
manuals — presentations
all types of literature

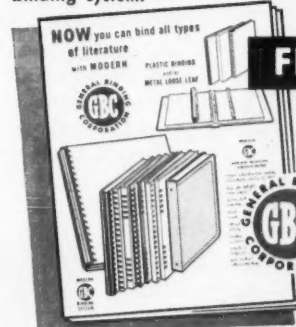


NOW, all GBC punching accommodates the new multiple ring GBC Metal Loose-Leaf Binding as well as all Cerlox Plastic Bindings.

RIGHT IN YOUR OWN OFFICE

YOU SHOULD HAVE THESE IMPORTANT FACTS!

Handsomely illustrated in four colors this just-off-the-press brochure shows how the new multiple ring GBC Metal Loose-Leaf and Cerlox Plastic Bindings are combined into one superb universal binding system.



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Improve all your literature...guarantee maximum attention and action for every message...and prestige, utility, color. Pages lie flat, turn easily, can be interchanged between GBC Metal Loose Leaf and Plastic Bindings. Efficient GBC machines cost no more than a standard typewriter. Anyone can operate.

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General Binding Corporation

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Please rush me my FREE copy of the new brochure "Now you can bind all types of literature..." I understand there is no obligation.

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City Zone State

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clatter can be controlled safely...

fire-safe Fiberglas Ceilings soak up office noise!

Noise costs money—it wears down your workers, breeds inefficiency. That's why a ceiling of Fiberglas* Acoustical Tile can mean lower employee turnover, higher employee output. A Fiberglas Ceiling absorbs up to 80 per cent of all office noise.

They're beautiful—You can choose a ceiling to fit your office from a wide range of Fiberglas textures, patterns and colors. These bright ceilings are easily installed, easily maintained... will never shrink, sag or swell.



Random Perforated* Acoustical Tile is one of the many attractive patterns in the full line of economical Fiberglas Sound Control Products.

They're safe—Fiberglas Acoustical Ceilings have been approved by leading laboratories for fire-safety; they're so fire-safe they easily meet the strictest building codes.

And the cost is low—In fact, Fiberglas Acoustical Tile Ceilings provide the lowest cost fire-safe ceilings on the market today. Small wonder that they're specified for hundreds of offices throughout the country.

FREE BOOKLET. But find out for yourself how Fiberglas Acoustical Tile Ceilings can improve working conditions in an office. You'll find the full story in the idea-filled booklet, "The Ceiling that Cuts Overhead." Write for your free copy today! Owens-Corning Fiberglas Corporation, Dept. 174-B, Toledo 1, Ohio.

*Fiberglas and Sonofaced (Reg. U. S. Pat. Off.) Stria and Noise-Stop are trade-marks of Owens-Corning Fiberglas Corporation



SOUND CONTROL PRODUCTS

• Textured, Perforated, Sonofaced*, Stria* Acoustical Tile
• Textured, Sonofaced Ceiling Board • Noise-Stop*Baffles


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hurriedly several hours before. Pan American engineers carry their dictating machines with them in their cars. The cars are specially equipped to furnish power for the machines' operation.

For more information, circle number 224 on the Reader Service Card.

PERSONNEL


thought  starter

Blind workers reclaim parts in aircraft factory

Sightless workers have reclaimed some \$60,000 worth of "mixed" small airplane parts in the past 12 months for re-use in making jet bombers at the Lockheed-Marietta aircraft factory. Some 40 employees in the plant sort airplane "hardware" by touch and with the aid of specially-designed templates.

The company emphasizes that while dollar savings are important, far more important is the quality aspect. The quality control department has been highly pleased with the work.

SERVICES

thought  starter

Company-owned planes are piloted by top executives

Company-owned business planes are not too uncommon today, but the top executives of Lord Manufacturing Company, Erie, Pennsylvania, have become pilots to serve their customers better. They can be in the air within a few minutes after leaving their offices, located near Municipal Airport.

Catering to today's increased demands for customer service, they maintain two private planes, enabling these customer-conscious executives to augment the efforts of field engineers throughout the country.

methods

work center

"... men and machines

don't work in a vacuum.

Though you may saturate

your Work Stations with

skilled workers and

modern tools, they can pro-

duce efficiently only when

'community' factors like

traffic control, and ade-

quate lighting, and proper

communications — and

even creature comforts —

are properly integrated."

the integrated office

february 1955

A businessman's guide to air conditioning existing buildings

Here are the questions most often asked when management looks at air conditioning

Editor's Note: A businessman can reasonably expect air conditioning to "pay for itself." In his offices or plant, it permits employees to operate efficiently under adverse conditions. In a retail store, it encourages customer traffic. For building owners and managers, it assures higher rentals, longer leases. Since we have covered the pay-back principle in other issues of MANAGEMENT METHODS, this article is devoted exclusively to a simplified presentation of the pitfalls and problems that confront the layman who has decided to air condition, but doesn't know quite how to go about it.

You have several basic decisions to make as soon as you commit yourself to air conditioning. The most important one involves the type of equipment you should use. There are three fundamental choices: the central plant and duct system, the packaged unit method, or the chilled water system. You will not be able to make this decision yourself. Each of the three has its own peculiar advantages. Technical factors will, in every case, determine the choice.

Your next decision involves a choice of technical assistance. If your job is going to cost an appreciable amount of money, it's wise to retain a consulting engineer. On a big job, an air conditioning engineer generally charges 4% to 8% of the cost. If you want nothing more than complete plans and specifications, plus acceptance of bids and recommendations, the fee will be only 4% to 5%. For the larger figure,

he will supervise the installation and see that specifications are met. If your job is relatively small, the engineer will give you a flat fee basis.



What about the supplier?

Many businessmen ask, "If my supplier will guarantee his job, why do I need a consultant?" You don't need a consultant. Without one, however, you must establish to your own satisfaction exactly what "effect" you want air conditioning to produce. Knowing this, you can ask your supplier—whether it's a manufacturer, a dealer, or a contractor—to give you a written guarantee that the effect you desire will be produced by the installation. Factors to be considered in establishing effect are: outside weather conditions, number of employees, working hours, amount of lighting used in your quarters, and other special conditions that produce a heat load. Your guarantee should always categorically state these conditions.

Once you have a guarantee, don't approve or initial subsequent specifications and plans. You may void your guarantee without realizing it.

There is no substitute for reputation in the choice of a supplier. The length of time a man has been in business, the size of his staff to assure fast installation and proper maintenance, warranties on parts, and the flexibility

of service contracts must all be considered before taking action.



What about competitive bids?

By all means, obtain competitive bids. Remember, however, that you are not buying a commodity. Any bid that is substantially lower than others, particularly if it is made against the same plans and specifications, is cause for caution. Here's a specific example of what can happen: A contractor, pressured to make a low bid, may fabricate your ducts with very light-gauge metal. Result: excessive noise produced by vibration. Equally common is the practice of installing inadequate "tonnage" and working it harder to produce the effect you need. In this case, you'll wind up with insufficient cooling on extremely hot days and the likelihood of frequent maintenance because of breakdown.



What air conditioning costs

The two big cost variables are the structure of your building, and whether or not you intend to install a central plant. Without determining these, an estimate is almost impossible.

If you are thinking of packaged units, you will also have to consider whether or not you intend to include anything more than cooling. Most re-

What Size Chair does your Secretary "WEAR?"

Royal fits 'em all— short, wide 'n tall...

Royal provides the perfect secretary with the perfect secretarial chair. Extra wide, deep-cushioned seat and backrest figure prominently in her comfort. (No matter how prominent her figure) Exclusive "Micro-Hite" control and completely adjustable backrest bring Royal as close to "Custom-Tailored" as you can get. She'll be more comfortable (And more efficient) in a new extra wide Royal secretarial chair.

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Made of durable heavier gauge steel. Fully welded (Not spot welded) throughout. Longer wearing, fully molded foam rubber cushion is supported by all steel seat pan. Equipped with molded rubber scuff guards and ball-bearing casters.

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Showrooms: Chicago, Los Angeles, San Francisco, New York City. Authorized dealers everywhere



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1. Model No. 1265-N Features luxurious molded foam rubber seat and free-floating, 4-way adjustable backrest. Equipped with all steel seat pan mounting, molded rubber scuff guards and ball bearing casters.

2. Model No. 1277 Extra comfortable with molded foam rubber seat and 4-way adjustable padded backrest. Marvelous "Micro-Hite" mechanism adjusts seat with fingertip control.

3. Model No. 1276-N Budget priced, with features found on much more expensive models—foam rubber seat, "Micro-Hite" control, padded back and rubber ball bearing casters.

4. Model No. 1263 Extra large, deep, molded foam rubber seat and backrest. Free-floating backrest and all steel seat pan mounting give firm support. Fitted with molded rubber scuff guards and soft, rubber ball bearing casters.

See your nearest Royal Dealer or
Mail this coupon for complete information

ROYAL METAL MANUFACTURING CO.
175 N. Michigan Avenue, Dept. 32, Chicago 1, Ill.

Please send me complete information on your new,
extra comfortable secretarial chairs.

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ADDRESS _____

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(Circle 153 for more information)

liable manufacturers and contractors refuse to give a rule-of-thumb on packaged installations.

On a central system, about \$2.00 per square foot can be considered *minimum*. The amount of duct work, your geographical location, local labor costs, whether or not water-saving devices are included, and the building structure will be controlling factors.

In general, it is also well to consider the cost of maintenance in equating your real expense. For example, if you have a large central air conditioning plant, you will probably need a full-time maintenance man. For a smaller job, you can hire (perhaps through your contractor) the service needed. Service contracts vary from simple inspection and maintenance, plus cost of parts and labor for actual repairs, to all-inclusive contracts which really involve an "insurance policy" as well as maintenance. The latter contracts are more expensive, of course.



Advantages of both systems

If the length of time you expect to occupy your building is roughly equal to the probable life of your air conditioning system—20 to 30 years—you should consider a central plant and duct work system. In most cases, a central plant is also indicated when a considerable volume of air conditioning is required.

In favor of a packaged system is the fact that it is "portable." If you are on a short-term lease, and expect to move, this mobility is an important consideration. Collaterally, packaged units carry a low first cost in installations requiring a few units, and seldom require a maintenance man, since most manufacturers offer extensive parts warranties. You'll still need a repair man, and periodic maintenance is indicated, but it isn't a "big deal." In addition, packaged systems provide automatic zone control of temperature.

Whatever decision you make, don't minimize the importance of controls of this type. They cost but a fraction of your total investment, but they provide you with the flexibility you need for various occupancy conditions within your company, as well as the personal desires of your employees. m/m

methods

plan-
ning
idea

When you can't move to larger quarters...

Better use of present space actually means a savings in rent

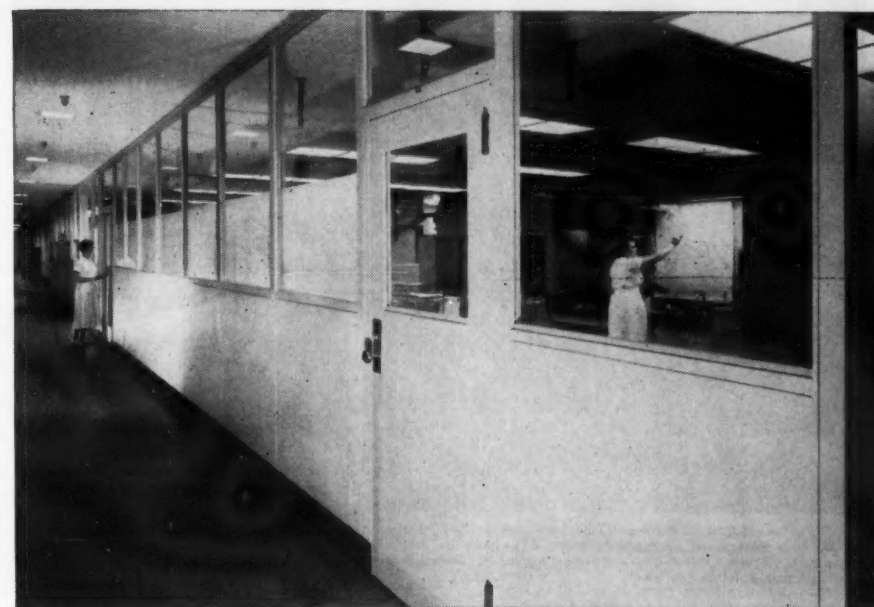
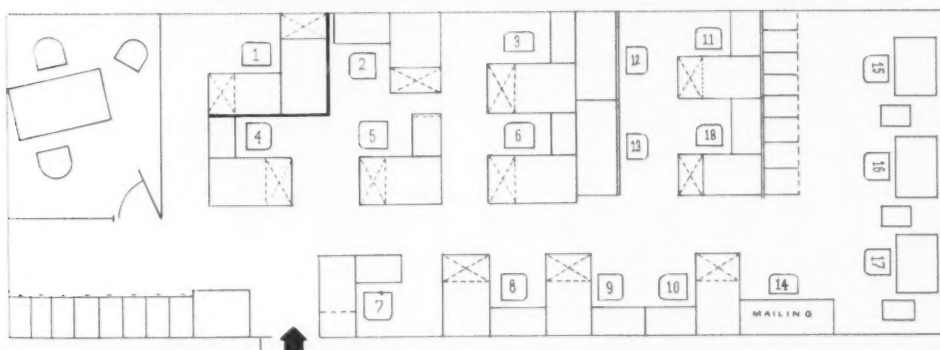


Although the book-keeping and traffic management department of Arkay Jr. Frocks in New York managed to crowd a total of 18 employees into an office area of 49' x 17', they were faced with the overwhelming problem of inefficient work and traffic flow within the department. Because more space was unavailable, a plan had to be worked out to more effectively utilize the present work area. A survey was made by layout specialists of Itkin Bros., Inc., and plans were recommended for an open area office, with

partitioned private offices for the office manager and the traffic manager.

The total effect of the new plan was to comfortably equip the office to take care of all operating personnel, plus allowing space for two additional employees, should the extra personnel be needed. The traffic manager, who formerly had an office set off by ceiling-height partitions, is now surrounded by free-standing, 68" high, translucent glass partitions at the extreme end of the office. He now has an equal amount of privacy, with better light and air

This floor plan details the new layout of the department operations.



HAUSERMAN MOVABLE WALLS

Save \$86,223 in 15 Years

IN UPJOHN RESEARCH LABORATORY BUILDING

Since 1939, revolutionary developments in pharmaceuticals have resulted in constantly changing floor space requirements for leading producers in that field. The Upjohn Company, Kalamazoo, Michigan, has found it easy to meet those fast-changing space requirements . . . easy to maintain high efficiency in its Research Laboratory Building . . . with walls that can be taken down and re-erected again and again — Hauserman *Movable Walls*.

To meet these necessary rearrangements with ordinary tile and plaster walls would have cost approximately \$167,373 . . . not including the expense of lost productive time during remodeling. With Hauserman *Movable Walls*, the rearrangements have been made in hours, rather than in weeks, at a savings of \$86,223.

Result: During the past two years, The Upjohn Company has installed approximately 5 miles of Hauserman *Movable Walls* in its new main plant in Kalamazoo. Isn't there an idea here for you?

Hauserman

Movable Interiors

OFFICES • SCHOOLS • LABORATORIES • HOSPITALS • INDUSTRIAL PLANTS

FREE BOOKLET!

Describes the many cost-saving advantages of using movable steel walls for every type of non-residential application . . . also reports on how eight companies saved a total of \$575,363 by using Hauserman *Movable Walls*. Write for your copy today.

THE E. F. HAUSERMAN COMPANY
7351 Grant Avenue • Cleveland 5, Ohio

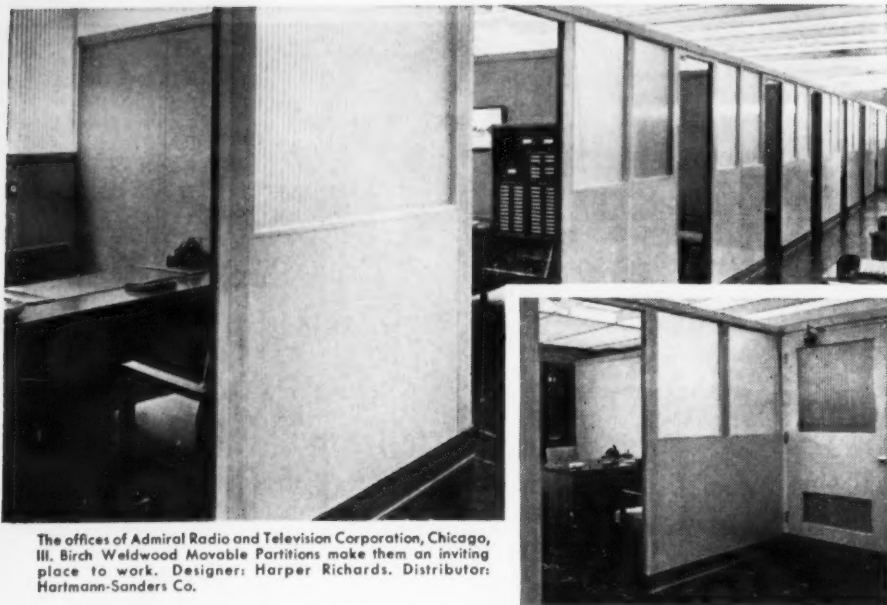
Please send your free booklet to:

Name

Company

City Zone State

(Circle 168 for more information)



The offices of Admiral Radio and Television Corporation, Chicago, Ill. Birch Weldwood Movable Partitions make them an inviting place to work. Designer: Harper Richards. Distributor: Hartmann-Sanders Co.

Flush movable partitions with the beauty of real wood

Weldwood's simple interlocking feature makes rearrangement possible on a week end or overnight

There is nothing that matches the warmth and beauty of *real* hardwood partition panels. When this natural beauty is combined with *low cost movability* it's a combination that is hard to beat. Handsome birch is standard; any wood is available on order.

FOR OFFICES ON THE MOVE. Unique metal keys which lock the panels together make it a simple matter to rearrange them. There are no screws. Snap-on matching post cap between panels hides telephone and electric cables.

TYPES OF PANELS include cornice and ceiling height, glazed and low railings. Door and wall panels may be interchanged without disturbing adjoining panels. Available in standard sizes.

NOISE BARRIER. The panels contain the same fire-resistant mineral core

which is used in Weldwood Fire Doors, providing a *noise barrier* twice as effective as a 2 x 4 partition with metal lath, plastered both sides.

GUARANTEE: Weldwood Partition Panels are *guaranteed for the life of the installation!*

MAIL COUPON or call any of the 73 United States Plywood or U.S.-Mengel Plywoods showrooms, in principal cities.

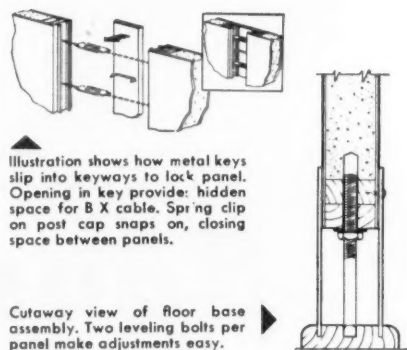


Illustration shows how metal keys slip into keyways to lock panel. Opening in key provide: hidden space for B X cable. Spring clip on post cap snaps on, closing space between panels.

Cutaway view of floor base assembly. Two leveling bolts per panel make adjustments easy.



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Please send me free literature on Weldwood Movable Partitions and names of nearest distributors. ☐
Literature on Weldwood Fire and Stay-Strate® Doors. ☐

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Address.....

City..... State.....



THE MAN

Bruce Henderson,
Vice President

THE COMPANY

Westinghouse Electric
Corporation

THE DESIGNER

Robert E. Dillon
General Office Equip-
ment Corp.



where they

THE OFFICES OF

MR. HENDERSON'S OFFICE is a good example of straightforward treatment of executive quarters. Extremes in decor and color have been avoided. It's an office that "looks like an office," without being cold or uncomfortable.

According to the designer, "Mr. Henderson requested that the furnishings be located so that the room could comfortably accommodate a total of eight people for meetings. He also specified an informal furniture grouping so that he could come from behind his desk and visit, in a relaxed manner, with business guests.

"As a result of our discussions, we planned a conference-style desk,

with an overhang top, which provides leg room for participants in small conferences. The top of the desk and its adjoining cabinet are made of Micarta with a primavera wood finish. The desk and the walls are walnut, the rug is beige, the other furnishings are brown, gold, or red.

"It was Mr. Henderson's desire to provide a telephone that could be used by his visitors or himself during informal visits, so we placed an extra phone on a corner table between the sofa and club chair. A clock was located in the opposite corner, where it can be seen from any point in the room, so Mr. Henderson could keep track of the time

work

SUCCESSFUL MEN



without embarrassing visitors by glancing at his watch.

"The overhead lighting is fluorescent and of the 'skylight' type that covers the whole ceiling. This creates soft, uniform lighting throughout. Two walls of the office are glass, which has been draped in a glass fiber fabric." m/m



New Development in AIR CONDITIONING Replaces Radiators

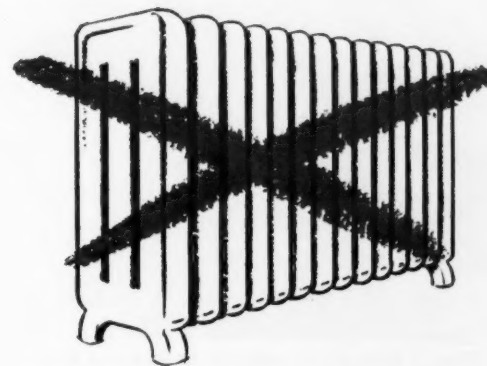
Get the Full Story Now At last, packaged units can be used
in any climate for winter-time heating as well as
summer-time cooling, and will in addition
SAVE ON FUEL COSTS

A revolutionary development in room air conditioners has been perfected by Philco engineers. It now means that instead of having a radiator for heating and an air conditioner for cooling, BOTH functions for year 'round comfort can be combined in a SINGLE COMPACT CABINET. When the air conditioner is installed, the radiator can be eliminated entirely, since tubing inside the air conditioner cabinet connects directly to the heating system.

Hundreds of these Philco combination heating and cooling units have already been installed and are in use in a major office building in Pennsylvania. This development is now the answer to low cost air conditioning plus more efficient heating in many types of buildings as well as hotels, motels, apartments and residences all over America.

Single Compact Unit Saves Space and Expense

The Philco Air Conditioner is all inside the room—nothing extends outdoors—yet is amazingly compact. Thus in many cases it will BOTH cool and heat without taking up any more floor space than the radiator alone, which in itself is often unsightly.



Far More Efficient than the Radiator It Replaces

In addition to providing utmost comfort in hot weather, this new Philco system is also more efficient for heating than the radiator it replaces, and saves on fuel costs. This is because the fan in the air conditioner circulates air to all corners of the room. Even more, the unit will provide ventilation in both summer and winter, so that at all times the windows can be kept closed to shut out dirt and noise. Anyone interested in room air conditioners for any purpose will want to know about this development. A factual case history showing costs and savings will be sent you without obligation; merely fill in and mail the coupon below.

For Case History of One Installation
Using Over 500 Units, Write Direct to

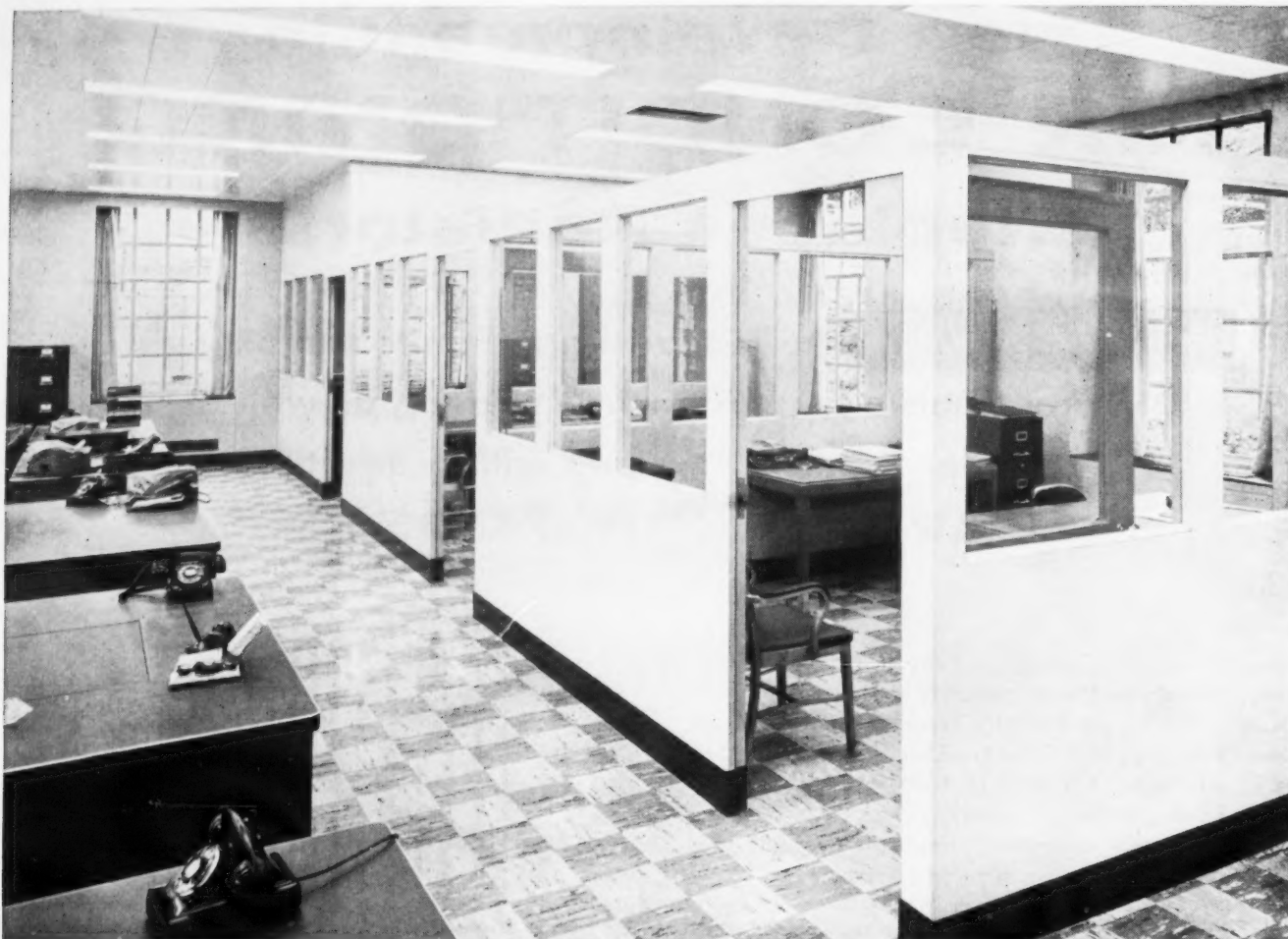
PHILCO
ENGINEERING DEPARTMENT

PHILCO AIR CONDITIONER DIVISION, Dept. N-2
C & Tioga Streets, Philadelphia 34, Penna.
Extension 5071

Please send me, without cost or obligation, a report on the new Philco air conditioner that replaces radiators.

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(Circle 175 for more information)



Firemen's Mutual Insurance Company, Providence, R. I.

Cram & Ferguson, Architects

Gilbane Building Co., Inc., Builders

Mills Movable Walls provide space control, insure efficiency at Firemen's Mutual

Firemen's Mutual Insurance Company was founded in 1854. It is only natural that this organization with more than a century of know-how and experience back of it would provide for *constant* efficiency in the lay-out of space in its new headquarters. All of the building's interior walls are Mills Movable Metal Walls.

Mills Walls promote efficiency — both present and future. They enable you to get maximum productivity through the most effective use of space. When changes in space requirements make new layouts advisable, these walls can be taken down, moved and re-erected quickly and easily, with a minimum of labor and at very low cost. Changes can usually be completely made overnight or during a week end.

As modern and attractive as they are efficient, Mills Walls combine this

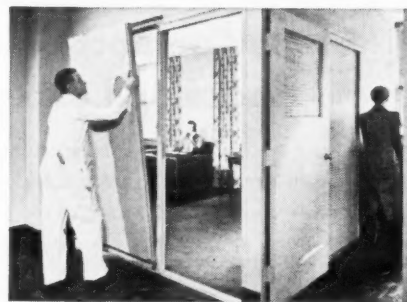
complete flexibility with distinctive architectural design and structural stability. They are thoroughly insulated and sound-proofed and provide easily accessible lay-in raceways for electrical wiring and controls.

Available in a wide range of pleasing modern colors and finishes, Mills Walls have baked-on enamel surfaces specially treated to eliminate all harsh light reflections. They require no maintenance whatever except occasional washing to keep them looking always their efficient best.

THE MILLS COMPANY
958 Wayside Road, Cleveland 10, Ohio



(Circle 139 for more information)



Mills Walls can often be moved in a matter of hours — without dust, debris, commotion or interruption of normal business routine.

Write for the new 68-page Mills Catalog—it's a practical work book on Space Control.

flow from the rest of the office. Directly adjacent to him, the office manager has a partitioned office with clear glass inserts. Whereas he previously had no private office, he now has increased privacy, and visual command of the office.

At the opposite end of the office, farthest from the two private offices, the bookkeeping machines section is located. They are separated from the rest of the bookkeeping department by 39"-high chair rail partitions, psychologically isolating this noisy operation.

Modular units have now been installed throughout the department, replacing old-fashioned large and odd-sized desks and filing cabinets. Increased efficiency of operation through better work flow, accommodation of two extra employees in the same area and more aisle space have resulted, and uniform and neat-appearing interior has been created. The improved appearance of the office furniture plus acoustical ceilings and new lighting equipment have created a better working atmosphere for all employees. m/m

plan-
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idea

New products
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Hot and cold water dispenser facilitates "coffee breaks"

A new water cooler also dispenses hot water at just the right temperature for making instant coffee and other hot beverages. The standard size units come in



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Write headings on accounting forms, tabulating sheets, address envelopes, post cards, statements, etc. Prevents copying errors . . . is simple, fast, economical, accurate. One typed label make 100 impressions. Write for literature and prices.

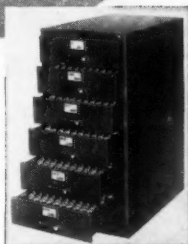
S & M Distributing Co.

1382 South Broadway
Denver 10, Colorado

(Circle 176 for more information)



What a Tel Kee System Means to YOU!



Besides the convenience of always having smooth working keys available, productive time is saved and costly delay avoided when your keys can be instantly located . . . and remember Tel Kee lets you use all locks—locks that are meaningless if their keys are not "controlled"! Send for Free Catalog No. MM-16 today.



The **MOORE KEY CONTROL** Systems
P. O. MOORE, Inc., 300 Fourth Ave., New York 10, N.Y.

(Circle 141 for more information)

february 1955

both pressure and bottle types, and offer an economical method to help reduce "time lost" labor costs that stem from "coffee break" periods.

The water cooler permits employees to make instant coffee, tea, chocolate, and soups in or nearby the work areas, reducing the time spent away from work. The units have a hot water capacity of five quarts (about 25 cups) and a recovery rate of from 40 to 60 cups an hour.

For more information, write to the Ebco Manufacturing Company, Columbus, Ohio; or circle number 225 on the Reader Service Card.

Combination stove-sink-refrigerator for office use

To fit right into the smart decor of a modern, casual, executive office, a compact new unit includes cooking, storing, refrigeration, and lighting facilities that provide maximum food service in a minimum space.



When the combination stove-sink-refrigerator-storage cabinet is closed, it looks like a regular cabinet, and blends into the office atmosphere. It is available in black mahogany or sand. Only one plumbing connection is needed, and the unit plugs into any electrical outlet.

For more information, write to Dwyer Products Corporation, Michigan City, Indiana; or circle number 231 on the Reader Service Card.

Booklet discusses storage problems and how to solve them

Booklet discusses storage problems and how to solve them

A free booklet tells how to set up storage facilities, make surveys, elevation drawings, and floor plans.

A free service is available to companies desiring storage department installations. The booklet is ideal for smaller layouts where specialists are not required.

For more information, write to the Aurora Equipment Company, 100 Prairies Avenue, Aurora, Ill.; or circle number 249 on the Reader Service Card.

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\$26⁹⁰

*Slightly higher in
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Along with low price, the Harter 26 gives you a wealth of style, comfort and dependability. *There is no more serviceable stenographic posture chair at any price.* Base is formed and welded into one sturdy piece. Easy, accurate chair adjustments are made by three handwheels. No flimsy adjustments here! Seat has the comfort of foam rubber. Upholsteries and finishes are the finest. At \$26.90, the Harter 26 is your solution to today's need for both low price and high quality.

HARTER
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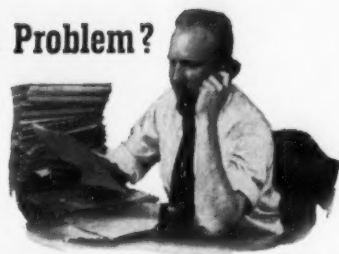
HARTER CORPORATION, 206 Prairie Street, Sturgis, Michigan
Send me literature on the 26 Chair and include name of nearest Harter dealer. Also include literature on Executive chairs ☐, Reception Room and Conference Room chairs ☐.

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Communication Problem?

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quickly
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There's no communication problem too tough for a TelAutograph Telecriber system, the only system that transmits original handwritten messages *instantaneously and simultaneously* to one or more points. Sending and receiving stations can be several feet or many miles apart, but each station or stations (selected by the sender) receives the exact message as it is being written!

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- Increases speed and accuracy.
- "Instan-Forms" designed to fit your systems.
- Each "Instan-Form" is a permanent record.
- Prevents verbal misunderstandings.
- Eliminates messenger service.
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- Saves time and effort.

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| <input type="checkbox"/> Quality Control | <input type="checkbox"/> Without obligation please |
| <input type="checkbox"/> Job Costs & Accounting | have a systems analyst call. |

Name.....

Street.....

City.....State.....

Company.....Title.....

(Circle 180 for more information)



TOOL LOAN PROGRAM

improves morale,
cuts employee theft

The do-it-yourself trend in building and home repairs is arousing enthusiastic response to a novel, money-saving service for employees at Bell Aircraft Corporation of Buffalo. A loan program for tools and equipment has been established to give employees the opportunity of borrowing the tools they need to tackle a job at home. Most of the requisitions are for small hand tools and power units.

The tools Bell consigned are used in manufacturing its products. Because of the high degree of precision and quality the company must maintain in its development and productive output, tool cribs carry the widest assortment of expensive and special tools.

Employees desiring to borrow equipment must fill out a form, including a description of the available property to be borrowed. So that the loans will not interrupt company schedules or operations, the privilege is limited to week-end periods from Friday night to Monday morning.

While helpful hints and short-cuts are readily available for all kinds of building and repairs, the fact still remains that the proper tools are needed. To purchase or rent these tools can be a costly proposition, particularly when special tools are required.

Bell's loan program has eliminated this cost for employees, improved employee morale, and stimulated interest in the do-it-yourself trend. It also helps to develop additional skills in persons who use these tools.

An interesting by-product of the program was the elimination of small tool theft. Prior to the program, employees were sometimes tempted to borrow a needed tool and forget to return it. Under the plan of encouraging employees to use company tools, with a control, both the company and the employees benefit. m/m



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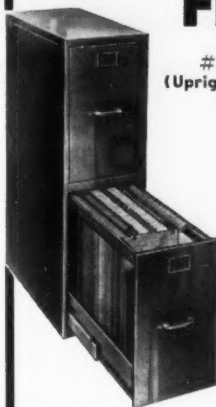
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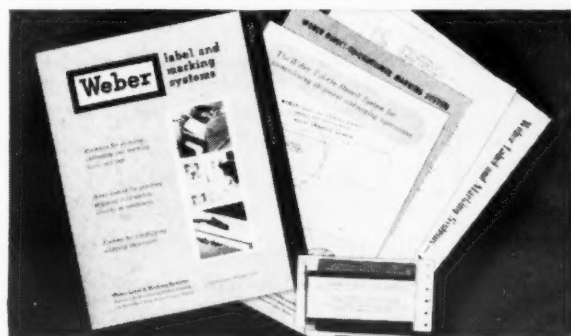
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Most companies usually do not consider installing a company restaurant if they have fewer than 500 employees. In a smaller company, unless the restaurant is heavily trafficked, automatic cafeterias are a more suitable solution. In most company-operated restaurants, for every \$1.00's worth of food sold, the company spends a \$1.25. A food service management firm can frequently organize an operation to break even with no out-of-pocket cost to the company concerned, although it usually costs about \$1.10 per dollar of sales, including management's fee and overhead.

In the Moloney Electric Company plant in St. Louis, which employs approximately 1,000 workers, a change in the method of dispensing food overcame widespread dissatisfaction with in-plant service on the part of both management and workers.

Cooked food was being brought in from the outside in bulk, and dispensed from mobile tables in the plant. The service was uncertain, unsanitary, and lacking variety. The major problem was the fact that they invariably ran out of food in bad weather, when people couldn't get out to eat. After a survey by a consultant firm, the bottlenecks were discovered: first, the dependence on cooks who were not on the premises; second, individual portions were dished up at the point of service.

On the basis of the consultants' recommendation, an efficient kitchen was installed in a 45x20' space. This space was made available by consolidating certain warehouse facilities. All food is now prepared and pre-packaged in sanitary, disposable containers in the commissary. It is loaded on modern mobile service trucks which are equipped with heating and refrigeration equipment to keep food at proper temperatures as the trucks circulate through the plant.

Making predetermined stops, on planned routes, on precise time schedules, this operation has completely eliminated the most common objections to cruising wagons—indifferent food and production interruption.

The total capital investment, including building alterations, restaurant equipment, and the mobile units, was less than \$15,000. Whereas the earlier operation cost the loss of valuable man hours, as well as money, the present service is actually showing sufficient net income to more than amortize the investment in equipment, besides returning a fair profit.

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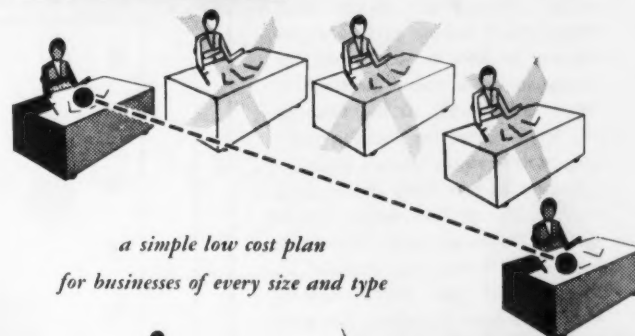
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[illegible]

Figure 1. The tabulator and printing machine (at left) automatically prepare the daily bottling production analysis report (above) in quadruple.

Editor's Note: The system described in this article is applicable, in principle, to virtually any industry. We are indebted to Robert Maier, Industrial Engineer at Hiram Walker, for technical assistance.

At the largest distillery in the world, Hiram Walker & Sons, Inc., in Peoria, Illinois, has adapted tabulating machines to the processing of production line statistics. The system makes possible quick and accurate productivity reports which become vital tools in helping to control the operating costs.

They had previously used a production analysis system based on manual entries and calculations. This proved unsatisfactory because it was too slow in supplying statistical information that pinpointed machinery trouble spots, and it did not report productivity results fast enough. Under the revised system, operating people have available, shortly after the start of each business day, a complete report of all bottling and packaging line operations

for the previous day. The time lag between this system and the old one—overnight, against two, three, or more days—is of critical importance. A summary and detail report, which has been prepared mechanically, enables the bottling superintendent and supervisors to determine at a glance whether a particular bottling and packaging line is up to, or below, normal expectancies. They can then immediately take corrective action.

Because of the multiplicity of items produced, 25 brands in 77 different packages on ten bottling lines, a system was needed which would give exact measurements of every production detail, quickly and accurately.

Since the system was to be of prime value to production people, it was only logical that it be developed in con-

junction with them. The first step was the establishment of a committee consisting of the general production manager, general superintendent, bottling general foreman, bottling foremen, bottling statistician, chief plant accountant, tabulating department supervisor, and plant industrial engineer. The group was made up of enough top men to insure that they would be familiar with the evolution of the program, and if sold on it, give support to make it work. Basic principles were established which were to be embodied in the system. These principles provided that the system:

1. Be readily understandable and easily interpreted.
2. Embrace all variable factors involved in the bottling operations:
 - (a) *manpower requirements*

methods

*Tabulating equipment
prepares complete daily
production analysis reports
overnight*



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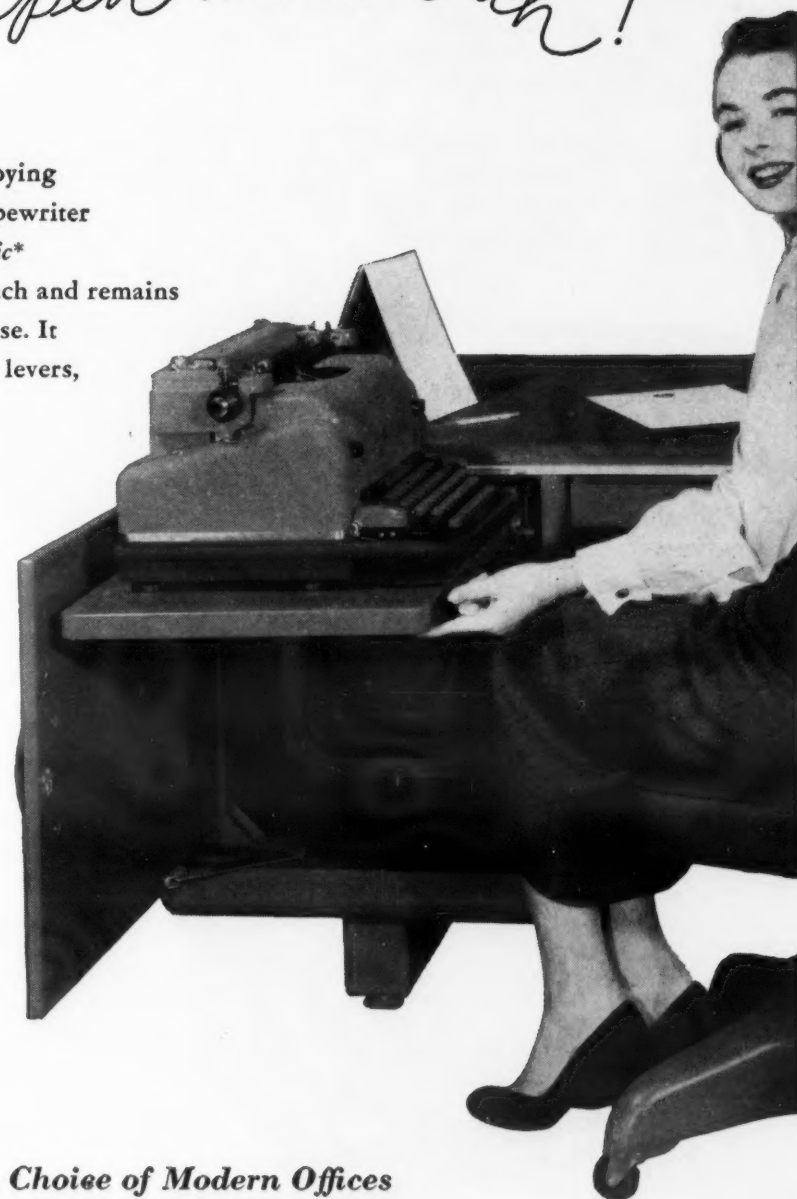
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DATE		PAGE NO.	
TOTAL — MAN HOURS		PER CENT NORMAL PRODUCTIVITY	
ACTUAL	NORMAL		

- (b) equipment speeds
- (c) equipment failures
- (d) fixed down time

3. Be operable with the least supervision and clerical responsibility.
4. Insure that desirable information, already being received, should not become lost.

How the system operates

The productivity phase of the program is based upon "management by exception." A measure or norm for operations is set up and then operations are analyzed with respect to the norm. The norm is considered as being the 100% operating level. Thus, they need concentrate only on those operations which are out of line with the norms, only the exceptions.

The main summary sheet of the daily report (Figure 1) shows the productivity for each individual bottling line, as well as the over-all bottling productivity. Excess labor hours, line down time, line operating minutes, line production, labor hours actually

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NORMAL REQUIREMENTS FOR BOTTLING OPERATIONS

Bottling Condition # _____
Equipment Speed _____ Bottles per Minute

Applies to _____ Date _____

Size of Container: _____

Brand and Product: _____

Following States: _____

Special Instructions: _____

Normal Bottling Line Direct Labor Requirements

Operation	No. of Personnel	Operation	No. of Personnel
1. Case Room	1	14. Boxer or Coupons	
2. Filling Machine	1	15. Gift Cartons	
3. Capping Machine	1	16. Gift Bags	
4. Spiller	1	17. Inner Cartons	
5. Label Machine	1	18. Packers	
6. Strip Stamp Machine	1	19. Checkers	1
7. Bottle Placers	2	20. Stencil	
8. Jigger Caps	1	21. Line Relief	2
9. Hand Strip Machine	1	22. Forelady	1
10. Strippers	1	23. Plain Cases	
11. Cello Seal	5	24. Case Girl	1
12. Auxiliary Label		25. Supply Caps	
13. State Stamps		26. Preserve	

Total Normal Personnel Requirements _____
X 7.33 hours (Actual Line Running time per shift) _____ People
+ 10.00 hours (Case, Packer, and Machine Relief) _____ Man Hrs.
= _____ Man Hrs. / Dos
X 1.154 (6% Normal Mach. Failure X 9.09% Fixed Down Time) _____ Man Hrs. / Dos

Figure 2. The Bottling Condition Form gives normal requirements for each bottling operation.

expended on the line, and the normal labor hours allowed for the amount and type of production run are shown separately, as well as in total for the entire bottling operation. The summary sheet also carries a cumulative up-to-date report of the above information for the current month. Supporting the main summary sheet is a series of sheets which contains the detail making up the summary information. The reasons for below-normal productivity can readily be determined from the detail portion of the report.

A form was designed outlining the normal requirements for the bottling operations (Figure 2). Included on

this form is the calculation of the normal man hours per dozen units bottled and packaged, including an allowance for normal expected lost time and personnel relief.

Use of tabulating equipment

As was anticipated, a large number of different and varying bottling conditions were encountered. This factor, when coupled with the number of bottling lines normally operated at the plant, made it apparent to the committee that the results of the system could not be attained and maintained. The accounting department was consulted, and with its cooperation, the system was made compatible with the requirements of the tabulating equipment as it developed stage by stage.

Bottling conditions code numbers were established, which serve a dual purpose. They not only satisfy tabulating equipment requirements, but they also designate bottling line personnel requirements. Normal equipment speeds for the various bottling conditions were also established, with the normal direct labor requirements based on past performance data.

Each normal bottling condition has a corresponding tabulating card (Figure 3). A supply of pre-coded cards for each condition is maintained on file in the bottling department, and printed by the tabulating department. The correct Bottling Condition Card is removed from the file and assigned to

Figure 3. A Bottling Condition Card is assigned to each order or group of orders and contains all essential information on the particular bottling run. The supervisor (right) inserts the condition card in the recording clock at the end of the production run.

24 07 4 00 PTS		FIVE O'CLOCK		SUBSISTENCE		ACTUAL		E		ESS		M		REAS		CODE		DOWN		REASON	
NORMAL		TWO		THREE		FOUR		FIVE		SIX		SEVEN		EIGHT		NINE		TEN		ELEVEN	
PERSONNEL		PERSONNEL		PERSONNEL		PERSONNEL		PERSONNEL		PERSONNEL		PERSONNEL		PERSONNEL		PERSONNEL		PERSONNEL		PERSONNEL	
LINE NO.																					
JOB-SEC																					
THIS END																					
UP																					
LINE TIME CARD																					
DATE																					

each order or group of orders. The date and bottling line number are inserted manually on the face of the card, while the order numbers, amounts, and states to which the product will be shipped, are inserted on the reverse side. Each day the various line supervisors are given a pack of these cards. They represent the bottling production schedule for the line for that particular day.

The line supervisor places the card into a time clock before and after each run. She also clocks the starting and ending time of any excess labor encountered during the run. The reason for the excess labor, and the number of persons required to perform it, is entered in the space provided. The same is done with the total units produced. The production checker then calculates total actual minutes for the run, as well as any excess labor. He also codes the reason for each excess labor entry; reason codes have been established for practically every possible excess labor contingency.

Each bottling line maintains a log of line down time, with the appropriate reason shown for each total of down time. The production checker obtains this log, calculates the minutes for each reason shown, and applies the proper down time code. These code numbers cover a wide variety of lost time contingencies. The down time totals, by reason code and sequence of occurrence, are transferred to the

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proper Bottling Condition Card. The card then is ready for calculation and is sent to the tabulating department.

All of the various condition cards are processed by the tabulating department. The tabulating machines calculate the productivities for the various conditions encountered and prepare a Production Analysis Report.

Results of the system

Under the new system, the productivity level has been maintained on the bottling lines during the past year, despite an increase in the normal number of line changes. These changes require a bottling line to be shifted from one brand or size to another, during the course of the work day, and cause work stoppages which can be time-consuming and costly. In spite of the increase in such interruptions, productivity has improved, and lost time on production lines has declined.

The system also enables management to more accurately estimate production costs. It serves as a valuable tool in production planning. It has been of tremendous help in expediting a package standardization program launched by the company some time ago. Finally, the new system not only brought about greater accuracy over the former system, but reduced clerical work. The calculating of data under the old manual system was performed by three accounting department employees. After installation of the new system, one of this group was transferred to the tabulating department to process necessary reports, the other two were assigned to other duties. m/m

"worth

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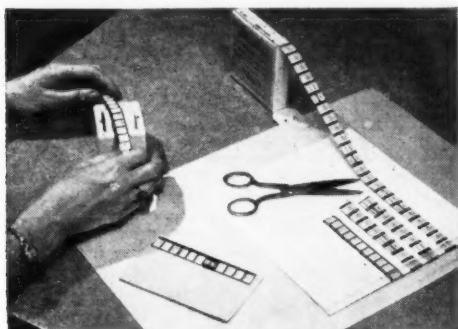
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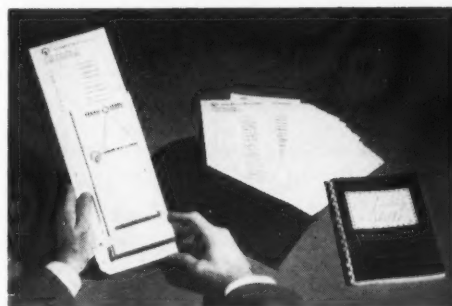
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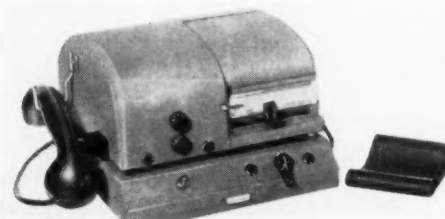
Sheets punched with the same permanent holes as the original punching can be added to the book at any time, simply by sliding the backbone off the open ring section. Unskilled help can easily bind 150 to 200 books an hour by hand.

For more information and samples, write to Plastic Loose Leaf, Inc., 209 South Jefferson Street, Chicago, Ill.; or circle number 236 on the Reader Service Card.



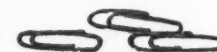
Inter-office telephones can be adapted for network dictation

A company with an inter-office dial tele-



phone system (PBX) can now have the advantages of multi-station, remote control, network dictation. A new system allows an unlimited number of dictators in any number of offices to dictate to a central recording unit through their regular telephones. The dictator simply picks up his telephone and dials a pre-determined code, which connects the extension with the central dictation equipment. *Start, Stop, Playback, and End of Dictation* signals are all transmitted by dialing pre-arranged numbers.

For more information, write to Peirce Dictation Systems, 5900 Northwest Highway, Chicago, Ill.; or circle number 234 on the Reader Service Card.



New adding machine features automatic multiplication

A new figuring machine permits completely automatic multiplication on printed tape. This machine possesses a single simplified keyboard designed for ease of



RITE-LINE COPYHOLDER

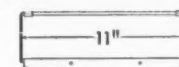
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NEW TELESCOPIC
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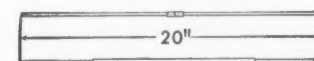
\$17.75
PLUS TAX

TELESCOPIC EYEGUIDE

Accommodates all widths of copy from a machine tape to 20 inches.



EYEGUIDE CONTRACTED



EYEGUIDE EXTENDED

FREE TRIAL OFFER Write, asking us to send you a RITE-LINE Copyholder with the understanding you may return it without charge within ten days.

RITE-LINE CORP. 4209 39th Street, N.W.
Washington 16, D. C.
(Circle 152 for more information)



**PRINT hundreds of FAST,
CLEAN PERFECT COPIES**

• IN MINUTES

• IN 1 to 5 COLORS

Now, you can make 120 or more copies per minute of anything up to 9 x 14 inches in size — typed, written, drawn, traced or ruled — in 1 to 5 colors. All in one easy, inexpensive operation. The Heyer Conquerors, Manual and Electrically Operated, are the duplicators with ALL the features... priced much lower than comparable machines.

Model 70-Hand Operated—\$195 (plus tax)

Model 76-Automatic Electric—\$325 (plus tax)

Write today for FREE descriptive literature and name of your nearest dealer-to:

THE HEYER CORPORATION
1832 S. Kostner Ave., Chicago 23, Ill.

(Circle 130 for more information)

methods

...design, rule, and type-compose masters for

FORMS

'direct-to-plate', stencil or other duplicating surfaces

YOU ARE READING TYPE PRODUCED ON THIS MACHINE

Vari-Typer

Rules Forms
and Leader Lines
and Composes Type
in the Same Operation!

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720 FRELINGHUYSEN AVE. • NEWARK 5, N. J.

PLEASE SEND VARI-TYPER BOOKLET C-30

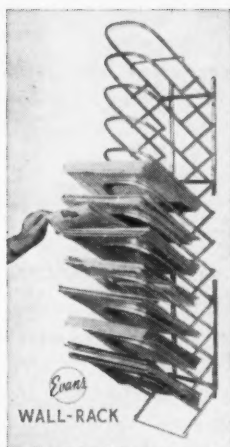
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COMPANY

ADDRESS

CITY ZONE STATE

(Circle 181 for more information)



USE YOUR WALLS

● Otherwise wasted wall space goes to work for you with the **Evans WALL-RACK**.
● Takes papers off crowded desk, putting them within easy reach. Use to hold books, catalogs or charts frequently referred to. Identification labels can be put on bows.

● In Mailing Room incoming, outgoing or inter-office distribution is speeded up.

● All aluminum, fastens securely to wall. Light weight, yet durable, holds over 40 lbs. Comes complete with double hanging frame and drive nails.

6-Section size \$11.00
12-Section size 18.50

Also 4" width—6 or 12 sections—at above prices

Made by the Makers of Famous
Evans GATHERING RACKS

See Your Dealer or Write:

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405 N. Munford St., Richmond 20, Va.

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NU-VISE STEEL SIGNALS
FOR "VERTICAL" SYSTEMS

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FOR "VISIBLE" SYSTEMS

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Graffco
SIGNALS and MAPTACKS
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See your Office Supply Dealer
GEORGE B. GRAFF CO.
54 Washburn Avenue
Cambridge 40, Massachusetts

(Circle 127 for more information)

February 1955



New hanging file folder saves time, facilitates filing

A new line of hanging folders makes filing and finding up to 50% easier. The folders are made from flexible, high-quality stock. Rounded steel rods with protective-coated ends are sealed firmly in the top edges of the folder, and the rods slide easily over a sturdy steel frame. The frames can be adjusted for a snug fit in all types of standard file drawers.

When placed on the frame, the folders cannot slump, sag, or become disordered. Celluloid index tabs stay at an even level

operation. It permits operators to run problems and retain the totals for further multiplication, eliminating the need for re-entry of figures, saving time, and avoiding the chances of transpositional errors.

Equipped with a simplified constant feature, this machine permits the multiplication of the same figure repeatedly without need for its re-entry each time. An operation lever enables users to do a variety of combinations of addition, subtraction, multiplication, division, and credit balance. Automatic totals and sub-totals can be taken by merely depressing the add-bar or the dual total key.

For more information, write to Victor Adding Machine Company, 3900 N. Rockwell Street, Chicago, Ill.; or circle number 233 on the Reader Service Card.



Open-shelf filing units available in variety

New open-shelf filing units are being



produced in single or double-face, in two heights, 72" and 84". They are 36" wide; the single-face depth is 12" and double-face depth 24". Sliding shelves are adjustable without bolting. File supports, 7" high by 9" deep, snap into place at any desired point on the shelves.

For a complete catalog and more information, write to the **Borroughs Manufacturing Company**, 3002 N. Burdick, Kalamazoo, Mich.; or circle number 237 on the Reader Service Card.

and can be changed to form any kind of indexing system.

For more information, write to **The Globe-Wernicke Company**, Ross and Carthage Avenues, Cincinnati, Ohio; or circle number 239 on the Reader Service Card.

Low-cost freshener unit neutralizes objectionable odors

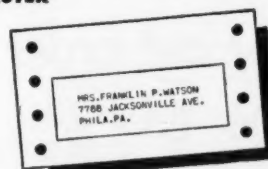
A new fan-operated air freshener neutralizes unwanted odors. This unit will deodorize areas up to 7,500 cubic feet. The freshener replaces odors with the

SCRIPTOMATIC

The only addressing system that prints directly from card masters to any type of material (envelopes, booklets, etc.)...or to a mailing tape.

✓ CHECK THESE UNBEATABLE ADVANTAGES:

✓ CHEAPEST POSSIBLE ADDRESS MASTER



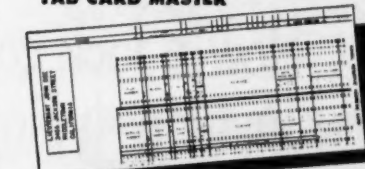
Paper, instead of metal or other stencil material.

Prepare at high speed with ordinary typewriter.

Eliminate duplicate lists.

Reduce filing to 1/16 the space required by regular stencils.

✓ SELECTIVITY AND FLEXIBILITY WITH TAB CARD MASTER



Any tabulating machine card can also serve as a Scriptomatic Master.

Scriptomatic masters can be made on continuous form cards, accounts receivable ledger, needle sort cards, etc., in any size and employing any amount of copy area.

PARTIAL LIST OF SCRIPTOMATIC USERS OWNING FROM ONE TO 12 SCRIPTOMATICS

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New York Tuberculosis &
Health Assoc.
*Walter Field Co.
*Wesleyan University
Press, Inc.

*Readers Digest
*Grit Publishing Co.
*U. S. Navy
*State Finance Co.
U. S. Treasury Dept.,
Bureau of Distribution
Concert Hall Society

*Journal of Living
*Jackson & Perkins
Lana Lobell
Hooper-Holmes Bureau
Lewis Howe Co.
Tohoku Electric Power Co., Japan
Lockheed Aircraft Corp.

(*More than one Scriptomatic)

Write for actual case studies and descriptive material. Discover now, at no obligation, if Scriptomatic can improve your specific procedures.

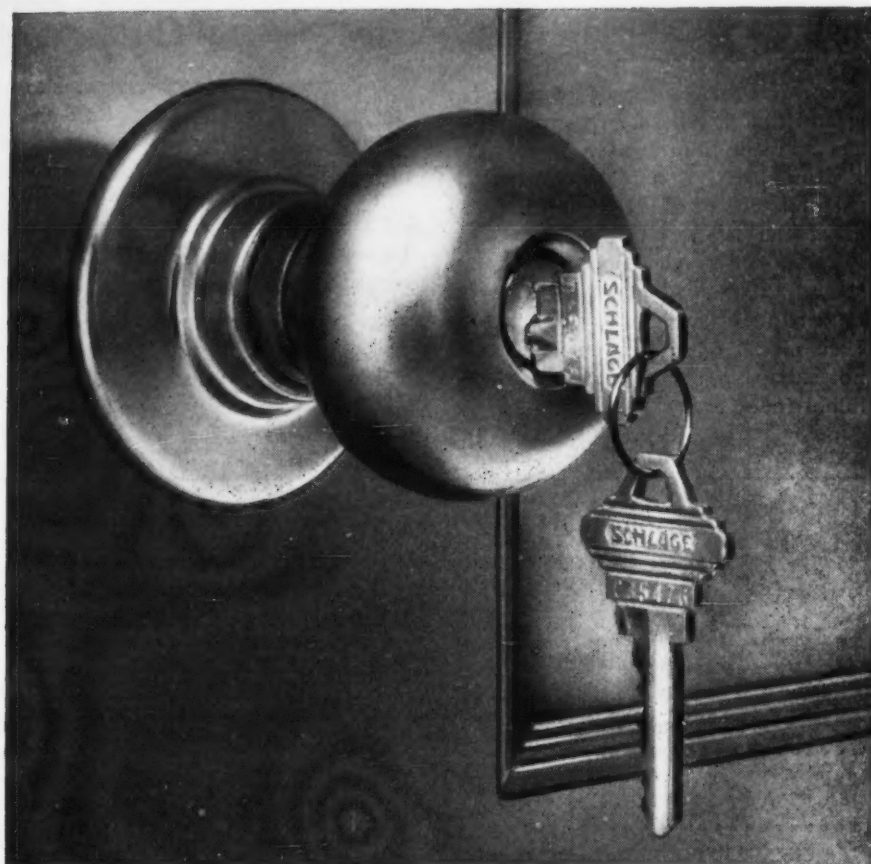
Scriptomatic

SCRIPTOMATIC INC.

310 North 11th Street, Philadelphia 7, Pa.

NOTE: Sales-Service organizations with necessary experience and qualifications are invited to discuss open territory.

(Circle 177 for more information)



How a lock company cut order-invoice typing time 80%

Schlage Lock Company, of San Francisco, has achieved exceptional efficiency in the order-invoice system with a snap-out form built around a Colitho Paper Offset Duplicating Plate. Typing time was reduced 80%. Mailing time was cut in half. Clerical errors were greatly reduced—and transcription errors have been eliminated!



Colitho Plates—plain or preprinted—can be adapted to any business form. The original

typing prepares the plate which is run off on an offset duplicator. Form and fill-in are reproduced in perfect register—cleanly—legibly.

This case history demonstrates the economy and efficiency that countless businesses now enjoy through the use of Colitho Plates. We have a collection of these factual stories which you will find packed with valuable ideas. May we send them to you? Use the coupon and you'll receive your copy of the Colitho Idea File promptly.

Colitho

THE "ONE-WRITE" WAY TO RUN A BUSINESS

Colitho Division, COLUMBIA RIBBON AND CARBON MFG. CO., Inc.
492 Herb Hill Road, Glen Cove, New York

Okay, send me the Colitho Idea File

Name _____
Company _____
Address _____
City _____ Zone _____ State _____

(Circle 113 for more information)



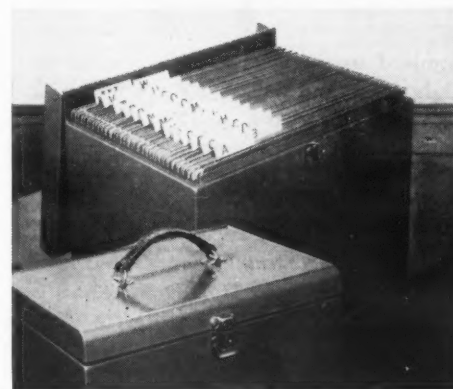
fragrances of spice, pine, floral bouquets, or cedar. The manufacturer states that operating costs on a 24-hour basis amounts to only a few cents per month. The price is extremely low, and the unit operates by plugging into any A.C. outlet.

For more information, write to the Williams Chemical Company, 487 Broadway, New York, N. Y.; or circle number 245 on the Reader Service Card.

Portable file allows travelers easy access to records

A useful portable file case of sturdy, but lightweight, steel measures a compact 9" x 10" x 12", exactly the right dimensions for filing letter-size papers.

Salesmen with busy schedules will find this suspension-type folder file valuable for quick reference on trips. Full width piano hinges, solid brass hardware, and an easy-to-grasp leather handle are features of the construction. The portable file has rubber cushions so that it will not dig into



seat covers when being transported, or scratch desk or table tops.

For more information, write to Oxford Filing Supply Company, Garden City, N. Y.; or circle number 238 on the Reader Service Card.

Free booklet gives complete data on printing costs

A 16-page estimating booklet, to help arrive at the cost of offset or letterpress printing promptly, is available for busy executives. It is easy to follow, so that even someone who has never ordered any printing can read the cost of most printing jobs, simply by knowing the size and quantity. It includes catalogs, brochures, circulars, booklets, letterheads, price sheets, envelopes, imprinting, etc., also folding, padding, punching, collating, etc.

For a free copy of this booklet, write to Regina Services Corporation, 847 Lexington Avenue, Brooklyn, N. Y.; or circle number 232 on the Reader Service Card.

Self-adhering foam rubber cushions keep pictures from tilting

A new aid stops pictures from tilting, and also keeps dust from collecting behind them. Self-adhering sponge rubber squares fit behind the lower edges of any size frame or mirror, out of sight.

The foam rubber grips the wall and the picture won't slip from side to side. Because the pictures are kept away from the wall, air circulates behind them and dust won't collect.

For more information, write to the House of Morrow, Dept. P4, Box 117, Wilmette, Ill.; or circle number 242 on the Reader Service Card.

New waste receptacle features built-in automatic tamper

A new type of waste receptacle features a "built-in" automatic tamping device, which permits a load capacity of up to 40 times more than that of conventional receptacles. The receptacle is available in three sizes to fill the needs of industrial and business establishments.

The tamping feature is designed to prevent waste from overflowing from the receptacle to the floor, and to minimize maintenance cost and inconvenience by saving up to 40 emptyings. A treadle at the base of the receptacle raises the tamper while opening a door into which the waste

methods



For all men in big jobs and big men in all jobs, Sturgis has designed a luxurious new chair that combines prestige and comfort in maharaja-like proportions. This is a chair for big decisions, maturely arrived at by men who have arrived.

Steel springs are topped generously, even profligately, with foam rubber to cradle a man's body in ease and security. The back, of noble dimensions, and the seat, tapering gently from front to rear, are like an embrace. You won't rest till you sit in this chair!

In luxurious combinations of leather or elastic versilan with fine fabrics. Swiveling on either the exclusive Sturgis fiber glass base or the famous Sturgis streamlined metal base. A guest chair to match.



POSTURE CHAIRS

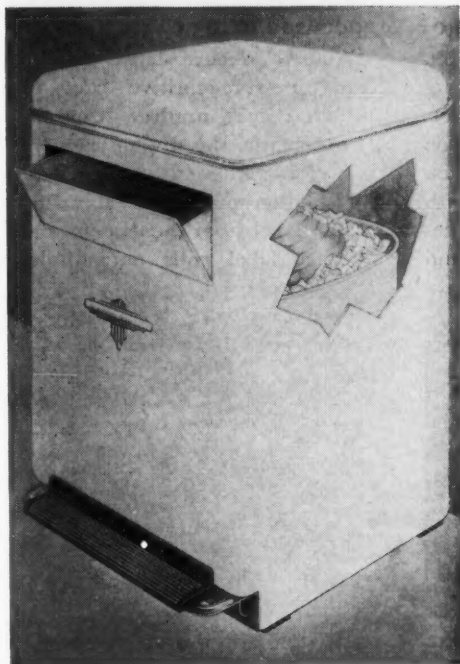
Manufactured in Sturgis, Mich. and Charleston, S. C.
The Sturgis Posture Chair Company, Sturgis, Michigan

THE STURGIS POSTURE CHAIR COMPANY
General Sales Offices, 154 E. Erie St., Chicago 11, Illinois

We'd like a copy of your illustrated folder describing this and other chairs. (1)

Name _____
Firm Name _____
Address _____
City _____ State _____

(Circle 155 for more information)



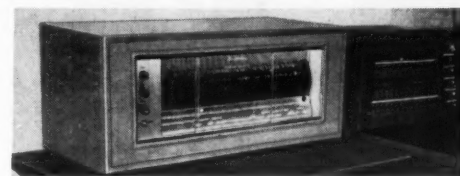
is dropped. When the treadle is released, the waste is automatically tamped down and "baled" in a container which is readily removed for convenient disposal without the hands touching the contents.

For more information, write to Pet Metal Products Corporation, Wallingford, Conn.; or circle number 241 on the Reader Service Card.

Background music service lease plan offered to business

A new service for special background music is available to business under a "lease-purchase" agreement. With this plan, monthly payments can be applied toward eventual ownership of a complete high fidelity sound system.

The compact unit can be placed on a table or shelf, and holds 400 records. It provides automatic programming, which means there is no need for an attendant.



Another outstanding feature is a music library. The music has been scientifically programmed for business and industry and offers a monthly "refresher" of new records. The system also provides for paging and public address service.

For further information, write to J. P. Seeburg Corporation, 1510 Dayton Street, Chicago, Ill.; or circle number 248 on the Reader Service Card.

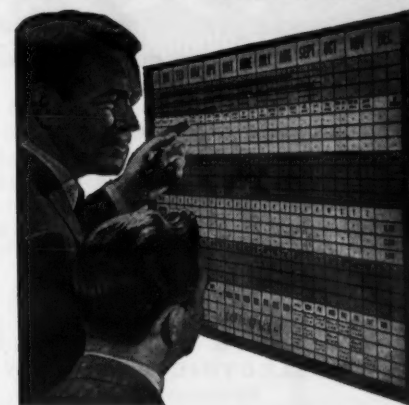
Elliott ADDRESSING MACHINES

offer you the only competition you can find in the Addressing Machine industry.

Consult your yellow telephone book or write to The Elliott Addressing Machine Co., 150-B5 Albany St., Cambridge 39, Mass.

(Circle 121 for more information)

You Get Things Done With Boardmaster Visual Control



- ☆ Gives Graphic Picture of Your Operations—Spotlighted by Color
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- ☆ Simple to operate—Type or Write on Cards, Snap in Grooves
- ☆ Ideal for Production, Traffic, Inventory, Scheduling, Sales, Etc.
- ☆ Made of Metal. Compact and Attractive. Over 50,000 in Use

Complete price \$49⁵⁰ including cards

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24-Page BOOKLET NO. M-400
Without Obligation

Write for Your Copy Today

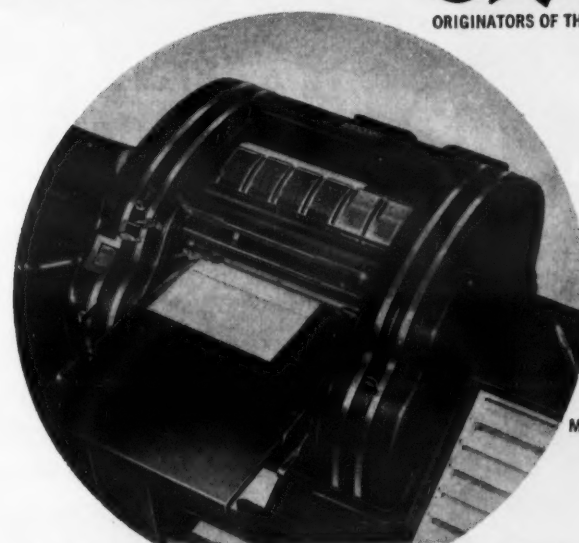
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(Circle 166 for more information)

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ORIGINATORS OF THE SPIRIT PROCESS



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THE WORLD'S ONLY MACHINES
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from one master without masks, blockouts, strip masters or shingled forms

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Now! SLASH WASHROOM EXPENSE

90%
and eliminate the mess!

The fastest automatic electric hand dryer ANYWHERE;
dries hands or face in seconds—deodorizes washrooms!

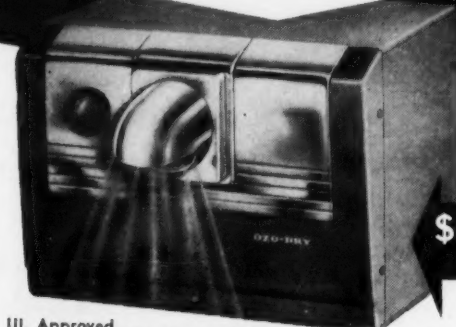
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REFRESHES STALE AIR**

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30-second push-button timer. 110V AC. Easy to install.

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STARTLINGLY
LOW PRICE!

\$79⁹⁵

UL Approved

(Circle 146 for more information)

New pocket secretary filler contains travel expense memo

A pocket secretary filler has been designed with daily expense pages and weekly expense summary sheets to make record keeping easy. Too often, sales expenses are forgotten unless recorded "on the spot." With a three-schedule arrangement, it has a place for every expense item and becomes the positive record of ex-

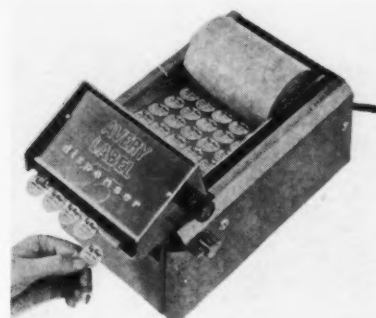


pense when making out Income Tax Returns. This three-schedule arrangement, plus its key punch adaptability, greatly reduces home office accounting time when expense accounts are processed.

For more information, write to
H & K Sales Co., 4505 State Line,
Kansas City, Mo.; or circle number
227 on the Reader Service Card.

New electric label dispenser speeds labeling operations

A new electric label dispenser feeds pressure-sensitive labels the instant they're needed. Completely automatic, the dispenser cuts labor costs and increases production in labeling operations. You simply take a label from the dispenser and another label rolls out automat-



ically, without using foot switches or rheostat controls. The new unit dispenses one label at a time, or several, per user's requirements.

For more information, write to
the Avery Adhesive Label Corpora-
tion, 1616 So. California Avenue,
Monrovia, Calif.; or circle number
228 on the Reader Service Card.

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FULL
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